DOCUMENT RESUME

ED 333 852 HE 024 712

AUTHOR Sanford, James F., Comp.; Reithlingshoefer, Sally J., Ed.

TITLE What If the University Took Learning Seriously?: Selected Papers from the Annual Conference on Non-Traditional and Interdisciplinary Programs (8th, Virginia Beach, Virginia, May 14-16, 1990).

INSTITUTION George Mason Univ., Fairfax. School of Continuing and Alternative Learning.

PUB DATE 16 May 90

NOTE 479p.

PUB TYPE Collected Works - Conference Proceedings (021)

EDRS PRICE MF01/PC20 Plus Postage.

DESCRIPTORS Academic Persistence; Adult Students; Computer Assisted Instruction; Continuing Education; *Cooperative Programs; Courses; *Delivery Systems; Educational Philosophy; Educational Quality; Faculty Development; Higher Education; Instructional Innovation; *Interdisciplinary Approach; Labor Turnover; *Learning; Minority Groups; *Nontraditional Education; Nontraditional Students; Prior Learning; Program Evaluation; Recruitment; School Business Relationship; Student Evaluation; *Teaching Methods

ABSTRACT

Alternative approaches to learning are the subject of these approximately 50 papers on non-traditional and interdisciplinary programs in higher education. The first set of papers addresses adult learning, including possible teaching and learning strategies, and ways to develop faculty and student performance through college fairs for adults, adult developmental psychology, educational planning, competition versus collaboration, and discourse analysis. The next group of papers describe alternative delivery systems such as various computer based methods, videotaped programs, and televised instruction. Assessment of prior learning and program assessment is considered in six papers which look at assessment methods, 2-year and 4-year college cooperation, and work autobiographies. Consortial, cooperative and collaborative programs are the subject of several papers which describe corporate-university partnerships, an interdisciplinary approach for soldiers and sailors, how to link the needs of industry and business with the educational approach, and developing effective communication for non-native employees. Four papers address philosophical issues in non-traditional and interdisciplinary education. The next five papers treat the recruitment and retention of special students and faculty through marketing, service management, commitment and other approaches. The following section includes eleven papers each of which describes special non-traditional or interdisciplinary courses. In the last group twelve papers describe special programs. (JB)

George Mason University
School of Continuing and Alternative Learning

PROCEEDINGS
from the

Eighth Annual Conference
on
Non-Traditional/Interdisciplinary Programs
Virginia Beach, Virginia May 14-16, 1990

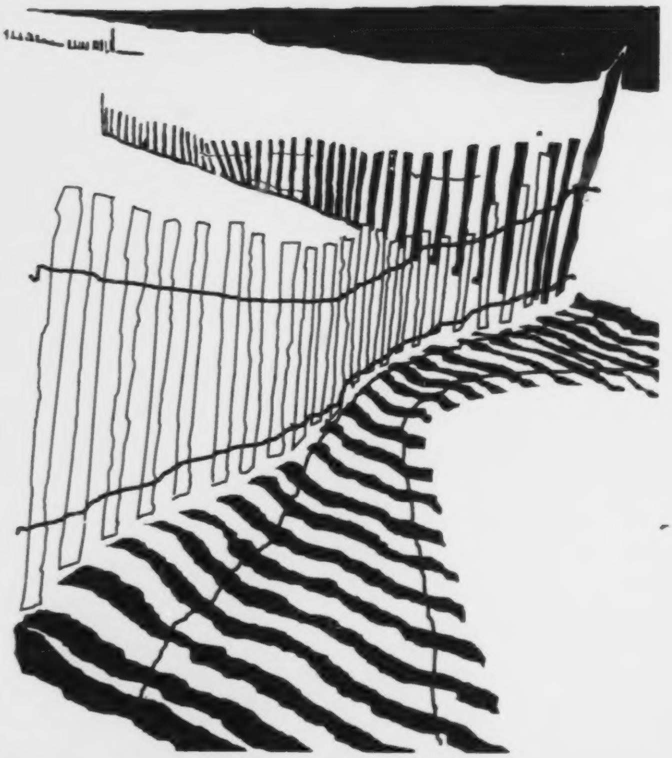
ED333852

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Sally J.
Reithlingshoefer

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

BEST COPY AVAILABLE

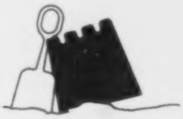


U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☒ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality

- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy



HE024712

Editor
Sally J. Reithlingshoefer

"WHAT IF THE UNIVERSITY TOOK LEARNING SERIOUSLY?"

Selected Papers from the Eighth Annual Conference

on

NON-TRADITIONAL

and

INTERDISCIPLINARY PROGRAMS

Compiled by:

James F. Sanford

Edited by:

Sally J. Reithlingshoefer

Sponsored by:

School of Continuing and Alternative Learning
GEORGE MASON UNIVERSITY

May 14-16, 1990
Virginia Beach Resort & Conference Center
Virginia Beach, Virginia

TABLE OF CONTENTS

ADULT LEARNING: TEACHING/LEARNING STRATEGIES AND FACULTY/STUDENT DEVELOPMENT

Competition and Collaboration in the Educational Community: What We Can Learn From Non-Traditional Teaching Methods in Adult Education Programs
A. Patrick Allen and Marti Harris Allen 3

Coordinating A College Fair For Adults
Sandra Blakeman, Janet Nagler, and Mary Helen Spear . . . 10

The Study of Adult Developmental Psychology as an Experiential Stimulus to Adult Development
Albert Erdynast, Roberta Romanoski, and Donald W. Mc Cormick 14

Integrity and Adult Education or What If A University Were To Take An Adult Education Program Seriously?
Joseph R. Hoff 21

Educational Planning: Immediate Gratification/Lifelong Process
Michael J. Kiskis 28

Taking Learning Seriously: From Competition To Collaboration
Paula E. Peinovich 34

A Study of Factors That Affect Academic Performance
Michael J. Pierson, Christopher J. Frost, and Oscar L. Dorsey 41

Interdisciplinary Studies Through Discourse Analysis
Hazel Jo Reed 49

Faculty and Student Development on the Mixed Age Campus
Vicki Williams Sheppard and Martha Hinkle Fleer 55

Overcoming Obstacles to Non-Traditional Education in a Traditional Institution: A Success Story
Patricia J. Shine 62

ALTERNATIVE DELIVERY SYSTEMS

An ITFS Model: Taking the Distance Out of Distance Education
J. Robert Burull 72

A Person at the Other End of the Modem: Long-Distance Delivery of Student Services for the Nuclear Science Degree Program
Lori A. Haywood 81

Providing Educational Opportunities for the Nuclear Industry: The Role of Computers in the Nuclear Science Program
Alice M. Myers 89

Videotapes as Tools for Program Development
Shirley W. Neal 97

Alternative Instructional Applications of Electronic Mail
Tim Peterson 103

Enhancing Televised Off-Campus Programs Through Faculty Training
Arnold E. Seigel and Cynthia Davis 108

Potential of Audiographic Computerized Telelearning for Distance Extension Education
Satish Verma, James Land, Terrence Thomas,
James Trott, and Fritz McCameron 115

ASSESSMENT OF PRIOR LEARNING AND PROGRAM ASSESSMENT

Honors Programs and Prior Learning Assessment: A Natural Connection
Lois C. Ambash 127

Advantages of Diversity in the Assessment of Experiential Learning
Richard M. Ashbrook, Pamela D. Knight,
Brian F. Wallace, and Gary L. Smith 135

2-Year and 4-Year College Cooperative Venture: Sharing Portfolio Preparation and Evaluation
Sandra Blakeman, Jacqueline Johnson, and Andrea Smith . . 144

The Work Autobiography as a Means of Assessing Experiential Learning
Deanna H. Bowman 150

Assessing Experiential Learning of Adults in Undergraduate Programs
Walter Czarnec 156

A Multiple Survey Approach to Student Outcomes Assessment
Leslie Overmyer Day and James F. Sanford 161

CONSORTIAL, COOPERATIVE AND COLLABORATIVE PROGRAMS

The Interdisciplinary College Approach for Soldiers and Sailors
Clinton L. Anderson and Steve F. Kime 171

Build Skills for the Present -- Learn for the Future
David J. Caris and Nancy A. Putinski 179

After the Wedding or Making a *Good* Idea Really *Great*
Lorraine F. Cecil and Edward G. Gersich 185

Linking Technology and Curriculum with Business and Industrial Advisory Committees
Thea M. Hoeft 193

Serving Corporate Needs Through Partnership Models
Carol S. Hopson and William J. Hierstein 199

Linking the Liberal Arts and the Professions: An Integrative and Interdisciplinary Model
Carol A. Moore and Barbara M. Kinach 204

Connections: A University-Corporate Partnership in Education
Richard K. Murray, Anna M. Mancino, and Ian Dinmore . . . 210

Collaboration Between the University and Healthcare: An Off-Campus Approach
Paul S. Shelton and Clara E. Bell 218

Developing Effective Communications in the Work Place for the Non-Native Employee
Patricia Traynor, Alice Zenon-Loggins, and Carroll Pollock 223

The Community Communication Corps: An Alliance for the Twenty-first Century
Stanley P. Witt and Sharon Jordan-Sita 232

PHILOSOPHICAL ISSUES IN NON-TRADITIONAL/INTERDISCIPLINARY EDUCATION

Educational Vanity: The Interdisciplinary Myth
David W. [illegible]ack 240

Interdisciplinarity for Today's World
Mary E. Clark 247

Fair Practices in Higher Education Revisited
Robert DeBard 255

How Can We Know Sacagawea?
Donna J. Kessler 263

RECRUITMENT AND RETENTION OF SPECIAL STUDENTS AND FACULTY

Marketing a New Program: A Collaborative Challenge
Clara J. Barut, Julie R. Pompa, and Robert L. Joyce . . . 275

Service Management: Implications for Adult Learner Recruitment and Retention
Raymond W. Campbell 279

The Achievement Gap or Many Start But Few Finish: Methods of Achieving A Significantly Higher Completion Rate for Students Enrolled in Independent Study Courses
Charles E. Carlson, Ann Marie N. Bridges, and Elizabeth A. Hansen 288

Minority Faculty Development: Making the Commitment
Donald C. Dendinger and Joseph A. Valades 294

Admission and Retention of the Adult Learner
Barry Karger and Gloria Dyer 301

SPECIAL NON-TRADITIONAL OR INTERDISCIPLINARY COURSES

Sociology Through Computer Applications: A Seminar Workshop
Joseph E. Behar 308

Freshman Seminar in a Nontraditional Context: A Course for the Adult Student?
Kathryn K. Frost, Christopher J. Frost, and Michael J. Pierson 321

Comparative Arts Teaching at the Undergraduate Level: Strategies and Fallacies
William E. Grim and Michael B. Harper 329

Poetry and Forestry: Intellectual Inquiry and Physical Labor in the Appalachian Mountains
Richard A. Hood 335

Linking Campus Issues With Interdisciplinary Studies Curriculum Design
Patricia J. La Noue 345

Reentering Adult Students: The Introductory General Education Course
Callistus W. Milan 353

Aviation and Culture: Glory in a New Key
J. Roger Osterholm 357

An Academic/Experiential Approach to Service Learning
Susan L. Roberts, Wilhelmenia I. Rembert, and Joseph S. Prus 365

Integrating the Liberal Arts: An Empire State College Approach
Jacqueline Rose 373

Computer Implementation of Critical Thinking in the History of Philosophy
George Teschner and Frank McClusky 380

Can Students Define Their Own Ways of Knowing
Carlson Yost 388

SPECIAL NON-TRADITIONAL/INTERDISCIPLINARY PROGRAMS

The Provisional Year
J. Thomas Davis and G. James Burns 397

A Proposal for a Multidisciplinary Ph.D. Program in the Social Sciences
Carl Goldschmidt 400

A Community for Learning: Restructuring the Non-Traditional Program
Tamsin L. Hekala 406

The Challenges and Benefits of the Welfare Reform Act for the Community College
Oscar C. Jensen and Ralph E. Garrett 416

The Crisis in General Education in the Arts and an Interdisciplinary Approach to Solving It: The Creation of a Department of Integrative Arts at The Pennsylvania State University
William J. Kelly 421

Learning to Lead: The Political Empowerment of Young People
Gregory G. Lebel and Georgia Jones Sorenson 432

From Hierarchy to Self-Governance: Restructuring the Educational Institution for Liberal Learning
D. Malcolm Leith 436

Faculty Externships in the Corporate World: An Opportunity for Growth
Janice Poley 441

Non-Traditional Interdisciplinary Programs for Small Liberal Arts Colleges
Paul W. Sechrist 446

The Development of Critical Systems Thinking
David R. Stevenson 451

Characteristics of Successful Learning Disabled College Students and Program Implications
Margaret Nan Turner 457

Meeting the Needs of the Nuclear Power Industry: The Bachelor of Science Degree in Nuclear Science
Elizabeth J. Weese 466

ADULT LEARNING:
TEACHING/LEARNING STRATEGIES AND FACULTY/STUDENT DEVELOPMENT

COMPETITION AND COLLABORATION IN THE EDUCATIONAL COMMUNITY:WHAT WE CAN LEARN FROM NON-TRADITIONAL TEACHING METHODS IN ADULT EDUCATION PROGRAMS

A. Patrick Allen
Marti Harris Allen

Introduction

Charles Lamb tells the story of a remote village in China. This village had very little contact with the outside world. The village was so remote, in fact, that the villagers did not know how to cook food. They ate everything raw. One day, a small boy who was given to playing with fire accidentally set his hut on fire. In less than ten minutes, the family home was gone.

As the family sifted through the rubble, they discovered that their pet pig had perished in the blaze. As the pig was being moved to a suitable final resting place, someone licked a finger and discovered that roast pig was a very tasty treat. The news spread rapidly throughout the entire village, and soon everyone wanted to roast a pig.

Over the next several weeks, the village was almost destroyed by a rash of house fires. The moral of the story is: if you don't know how to roast a pig, you might end up losing something far more valuable in the process.

I call this problem of destroying something of value in the process of cultivating something else of value "the roast pig problem." Tocqueville, the French social philosopher, although unfamiliar with Lamb's story, pointed out in 1830 a potential "roast pig problem" in the development of the American character. He worried that the competitive, individualistic habit of the American heart, while generally an admirable characteristic, might also lead to our inability to work together. In other words, our individualism might help us to create vast new enterprises, but at the same time render us incapable of working together in order to gain their full benefits.

A. Patrick Allen; Academic Dean; Anderson University; Anderson, Indiana 46012
Marti Harris Allen; Asst. Prof. of Computer Technology; Purdue University, Statewide Technology Program; 319 Cottage Ave. Anderson, Indiana 4601

The thesis of this paper is that Tocqueville was right. Competition holds a high place in our society, and rightfully so. We need to compete, and there is nothing intrinsically wrong with competition. However, we have been taught to be competitive in such a way that it destroys community. It destroys our ability to live and work and learn together - and that leads to alienation. The opposite of community is not competition, but alienation is. In the educational community, our problem is that in pursuit of a roast pig called competition, we have burned the house of community.

In this paper, we will argue that an overemphasis on competition in teaching and learning can result in learners who possess an underdeveloped set of collaborative skills. Since learning and citizenship are both communal acts, this is troubling.

We will examine the renewed interest in "community" as an important aspect of the learning process and point out some of the difficulties and obstacles faced in attempting to create an effective, collaborative learning environment. Several "first steps" in our collective thinking as administrators and teachers will be offered as a means of understanding one possible way to approach this important task.

Finally, we will site several teaching methods emphasizing collaboration and group efforts in adult education programs that are proving to be extremely effective, and suggest that they have great potential for use in traditional programs as well.

The Call For Community

Today, we hear the call for community from many quarters. In business, much of the call stems from our fascination with (and, in some cases, our fear of) the Japanese. One of the touchstones of Japanese management is a "collective competitiveness." Yes, they compete, and they do so fiercely, but from the position of we, not me. It's "We can do it better, not what's best for me."

And out management gurus from Peter Drucker to Tom Peters to Robert Townsend are calling for community. Peters and Waterman, in their popular book In Search of Excellence, argue that our best companies have always built a community of committed employees. They have developed a culture that promotes, values, and rewards collaboration. They understand that the secret to success is not the talents of individuals, but the effectiveness of their groups.

Robert Townsend warns that those leaders in American industry who do not build a participative community are merely presiding in turn over the demise of their organizations. The role of the manager, according to Townsend, is to get out of the office and to get "eyeball to eyeball" with the people. The goal is to get rid of the Us vs Them mentality, and to start working together.

Further evidence comes to us from the educational community. We are learning that students at all ages learn more effectively in groups. That's right, in collaboration. We are learning that learning is a communal act, and the calls for the development of community in education are being heard at all levels. Several years ago, Parker Palmer, a prominent Quaker thinker, received a rare standing ovation at the American Association for Higher Education's national conference when he told the audience that the most critical problem facing higher education today is the loss of community and the way for us to begin to rebuild community is to love - to love learning, to love the learners, and to love each other.

Incidentally, the call to community is not new. For instance, F. W. Taylor, the father of scientific management, called for a great "mental revolution" in the American work place. Listen to these words written in 1911: "they (management and labor) both (must) realize that when they substitute friendly cooperation and mutual helpfulness for antagonism and strife they are together able to make this surplus so enormously greater than it was in the past that there is ample room for a large increase in wages for the workman and an equally great increase in profits for the manufacturer." The great mental revolution begins when we realize that it is in our collective interest to work together. Even though Taylor's words betray a simplistic economic assumption about worker motivation common to late nineteenth-century management theorists and business leaders, the message is clear. We need to work together, or, as my old boss at the bank loved to say: "If we don't hang together, we'll hang separately!"

So you see, today we are hearing the call for community from many sources. Although the call is not new, it is important. It is important because it is one of the keys to institutional vitality. Remember, we need effective groups, not just talented individuals. The foundation of any academic enterprise is not individual productivity, but rather collaboration and community.

Will The Call Be Answered?

But will the call to community be answered? Can an institution of higher education develop an effective, participative community? Can we develop the collaborative skills and find the commitment necessary to promote the spirit of community? We believe we can, but we don't think we will. We don't think we will, that is, until we change the system until we change the way we roast the pig.

Here are several examples of how the system works and how it influences our understanding of competition and community. Take little league baseball, for example. As we understand it, the purpose of this activity is to introduce children to the value of the sport - "it's not whether you win or lose, but how you play the game" and all that stuff. But when you see the emotion with which the parents watch the game - the screaming at the umpire, at the opposing team's coach, at their own team's coach, and even at their own players - and the tremendous emphasis and jubilation with which they celebrate in victory and mourn in defeat, it doesn't take a child too long to figure out that it isn't really how you play the game but the final score that counts. Now this may be a sad but understandable commentary on professional sports today, but should it also influence the lives of the East Side Neighborhood Rockets or the Local University Ravens?

The same message is received in the classroom. It is not what you know or even how well you do on the test, but rather how well you do in comparison to the other students that counts. It is as if the objective of a test is to provide an opportunity for each student to confirm his or her social standing in the classroom. And even though our best research shows that learning is a collaborative act, we teach as though a line could be drawn from each individual student directly to the teacher. The way we teach insures that there are no colleagues in the classroom, just competitors.

When you move to business and industry, the message is much the same. We give lip service to the idea of participation and collaboration, but we get rewarded and promoted on the basis of individual performance. The competition for the corner office is all too often perceived and promoted as a decathlon rather than a team sport.

So, the system - at home, at school (at all levels), and at work - emphasizes competition at the expense of collaboration. By the age of 22, our competitive skills are highly developed, but our collaborative skills are as weak as the dollar. This can be changed, but it will not be easy.

What Must Be Done

We would like to suggest several simple first steps we can take along the path to community.

First, we must come to a new understanding of the nature of competition. That it is an essential part of the American character - true. That it is responsible for many of our great triumphs - no question. But the spirit of competition can also be destructive when it is not counterbalanced by the call to community. The question is not should we be competitive, but rather competitive to what end? Shall we compete for the betterment of the larger group, or for our own individual interests?

In our courses, we must think carefully about how we use competition as a motivational device, and we must do more to promote and celebrate collaborative behavior and our common life together. This can be an extremely rich learning experience for our students, and perhaps even more helpful for our faculty and staff.

Second, we need to have a renewed vision of what a great privilege it is to be a member of an academic community. There is nothing quite like a college or university. Where else do so many knowledge experts from so many fields live and work together? Where else do you find an entire community committed to the search for truth and the love of learning? When we have a vision of what a special place we have and how great we could be together, and this is supported by a set of shared values (like we're all in this together and when one member of the body suffers, the whole body suffers), surely community will be close by.

Third, we need to commit to things beyond the scope of our own self-interest. We need to see that we are members of a larger group and our contributions and actions can extend far into the future. Arthur Levine once asked a group of college students how they viewed the future for society. Answer: bad, lousy, no good. And what about their personal futures? No problem, things will be fine, I'll make it big. Parker Palmer suggests that a psychiatrist would look at these results and declare schizophrenia. We suggest that it is a learned schizophrenia, and that it is often reinforced in college.

On a recent visit to England, we had the opportunity to talk with the owner of a thatched roof cottage. We commented that you don't see many of these things anymore. He agreed. He cited the high cost of insurance, the threat of fire, the trouble with birds and insects, and the problem of maintenance. But most of all, he said, the big problem with a thatched roof is that it just doesn't last. Why a roof like this won't last more than a 100 to 125 years!

We smile at this. We smile because in a society where a lifetime guarantee on a roof or a life sentence is not more than 20 years, we do not often think beyond out own lifetime. We produce and build buildings as if we were all going to be gone in ten years.

Bill Moyers tells of one Thanksgiving when he returned home for the holidays. He was deeply moved when he saw his own parents planting trees - trees whose shade they knew they would never enjoy. They were simply doing it for others - people they didn't even know. They were doing it because they could see beyond their own needs to a time when someone else would appreciate the shade of a big oak tree. They were doing it because they recognized that the shade of any big oak tree is ultimately a gift of community.

Now that is the spirit we are after. We have an obligation to challenge our students to be the best they can be, and to understand that one's very best is always found in serving the common good rather than in pursuit of self-interest.

Finally, at the risk of sounding spiritual, we want to suggest to you that the foundation of a learning community is love, and that the call to community is fundamentally a call to love.

In the first place, we ought to love learning. Have you ever stopped to consider what a wonderful place a college is - an institution actually dedicated to learning and the pursuit of knowledge? Do you realize what a rare privilege it is to work in such an environment? And yet, what kind of role models are we for the learning community? Do we love the learning process, and do our lives exemplify for the students what it means to be a liberally educated person and a life long learner? Is it fair to publish catalogue statements about liberal learning outcomes that require more from our students than we as faculty members are prepared to give?

Second, we ought to love our disciplines. We ought to bring to our classrooms a dedication and excitement about what we do. Enthusiasm is contagious and greases the wheels of the learning process, but do we really have the right to expect out students to be more excited about our discipline and the courses we teach than we are?

Finally, we ought to love the learners. Despite how often they fail, lose confidence in themselves and in us, wax hot and cold, struggle, complain, and give up only to try again, we should remember that they are relative newcomers to the learning community and just learning to walk. They have a long journey in front of them and they will need all the support they can get. And since we are all members of the learning community, that means we should love each other as well. Can we benefit at our advanced stage along the journey from membership in a learning community that is characterized by a love of learning, a love for our own disciplines, and a love for each other? We think so.

Some Specific Examples

We have argued that an overemphasis on competition in society in general and in our educational institutions in particular has left a number of our learners with an underdeveloped set of collaborative skills. We are excited by the renewed interest in "community" as an important aspect of the learning process, and believe that we have much to learn from teaching methods currently used in non-traditional/adult educational programs. Here are several examples.

First, in classes that are populated with both traditional and adult learners, many adults learners feel threatened by the younger students. Some have been away from the formal classroom for a long time and the thought of testing is extremely frightening. Also, many students assume that their grades will be based on some type of competitive curve. Grading by the accumulation of points rather than by percentage scores or letter grades can help to relieve grade anxiety when the point scale is set at the beginning of the course. By explaining to the class that all those who earn 450 points on tests and projects throughout the course will receive an A, students are not put into direct competition with each other and are more likely to help each other. (Of course, the teacher must be committed to the grading scale, even if everyone accumulates enough points to earn an A.)

Second, students can learn much by assisting and supporting each other. In lab courses, students can be encouraged to question each other and work together to solve their problems. This also has proven extremely effective in computer programming courses.

Finally, when direct competition for grades has been eliminated, learners are more inclined to participate in both formal and informal study/support groups. We are most impressed by the power of the supporting group that is found in many "modular" adult education programs. Here, the group goes through the program together. The instructors change from course to course, but the group stays together. Many close relationships develop, and students begin to think in terms of the success of the group rather than merely in their own individual success. The goal is for each member to succeed and make it through to graduation. Group members go out of their way to bring new ideas and information to the group and to utilize their own strengths and experiences for the common good.

We believe that this kind of educational environment holds great promise for quality learning in many settings. The group becomes a learning community in which the success of each participant is important to the whole community. This is as it should be. We trust that those of us in traditional educational settings will be able to see the value in many non-traditional approaches, and begin to find ways to encourage the development of true learning communities where we teach and learn and live.

References

Bellah, R. N. et al. Habits of the Heart: Individualism and Community in American Life. New York: Harper and Row, 1986

Lamb, C. A Dissertation Upon Roast Pig. Mount Vernon, Peter Pauper Press, no date

Levine, A. When Dreams and Heros Died. San Francisco: Jossey-Bass, 1981

Palmer, P. The Nature and Meaning of Community. Paper presented at the 1987 National Conference on Higher Education. Chicago, March 3, 1987

Peters, T. J. and R. H. Waterman, Jr. In Search of Excellence: Lessons from America's Best Run Corporation. New York: Warner Books, 1982

Taylor, F. W., quoted in D. A. Wren's The Evolution of Management Thought, 3rd. Edition (p. 125). New York: John Wiley & Sons, 1987

Townsend, R. Further Up the Organization. Tape interview with Tony White. Listen & Learn U.S.A., 1984

COORDINATING A COLLEGE FAIR FOR ADULTS

Sandra Blakeman
Janet Nagler
Mary Helen Spear

Introduction

Those of us who work with adults recognize Knowles' definition of the adult learner as being self-directed, bringing a quantity and quality of experience to the classroom, being ready to learn, and being motivated by external and internal needs (Knowles, 1985). But we also recognize that a "missing link" can exist which we must address (Cross, 1978). That link is the information needed for adults to make decisions and adjustments in the learning options available to them. Allen Tough (1978) feels that, "One finding is clear, adults want additional help and competence with planning and guiding their learning."

Patricia Cross has outlined several options to fill in the "missing link". These include the professional educational broker, the development of a data bank listing options available in a particular area, advertising in the various media, counselors on an educational campus, and the development of life-long learning centers (Cross, 1978).

These options all have drawbacks because they may be expensive for the student as in the case of the professional counselor, or expensive for an institution as in the case of data bank development, paid advertising, and the development of the life-long learning center. The counselors of a particular college campus may not be asked the type of questions that would lead to a response suiting the particular needs of an adult, and the counselors may not be aware of the existence of the particular service on their own campus.

In response to the gap in adults' awareness of the options for returning to school as well as experiential learning, the Experiential Learning Assessment Network (ELAN), a group of educational professionals dedicated to the promotion of adult and experiential education in Maryland and surrounding areas, developed an idea to combat that lack of knowledge. In October, 1989 they sponsored a college fair for adults.

Most college fairs are held for the purpose of attracting traditional college age students to particular educational institutions. It is an effective recruiting tool. Adults, however, who also need information about choosing a college are not considered for this type of activity.

Sandra Blakeman, PLAN Coordinator, Prince George's Community College, Largo, MD 20772
Janet Nagler, Counselor, The American University, 153 McKinley, 4400 Massachusetts Ave., NW, Washington, DC 20016
Mary Helen Spear, Professor, Prince George's Community College, Largo, MD 20772

As the percentage of adult students rises in community colleges in particular, and as four-year institutions recognize the need to attract adult students, more attention needs to be paid to providing services needed by adults. ELAN decided to fill this gap with a college fair strictly for adults. Therefore, a committee headed by Janet Nagler was formed, plans were made, and the fair became a reality.

Intentions

The primary intent of the fair was to gather representatives from most of the colleges and universities in the Washington, D.C. metropolitan area (which includes Maryland and Northern Virginia) all in one place where adults considering returning to school could explore educational options by talking to admissions representatives, academic advisors, administrators, etc. on an informal basis. Adults are often intimidated by even the thought of venturing on to an unfamiliar college campus to seek information about education, or to visit an admissions counselor or academic advisor. College campuses can be confusing places to anyone trying to find parking and locate a building and room! Add to that the feeling some adults have that they are way too old to be on a college campus, and it is no wonder many of them procrastinate about finishing a college degree.

ELAN felt that bringing adults and college representatives together in a non-threatening atmosphere might make it easier for adults to return to school. Many adults are not aware of all the educational options including experiential learning, off campus and evening programs, and the variety of degree programs offered in the Washington, D.C. metropolitan area.

A secondary intention of the college fair was to bring educators dedicated to adult students together to meet each other, compare programs and ideas, and to swap materials. This event provided an opportunity for ELAN members and others to participate in a non-competitive environment where the primary goal was to assist adults with educational planning.

Structure

The college fair was held at the National 4-H Center in Chevy Chase, Maryland on Saturday, October 14, 1989 from 10am to 3pm. Each participating institution was charged a fee, paid in advance, to cover expenses, which included use of the facility and lunch for each representative. Institutions set up their displays on tables arranged in a horseshoe shape with check-in at the open end. Potential students were greeted by a member of ELAN and handed a packet with a list of participating institutions and scheduled workshops. No fee was charged to prospective students attending the fair.

Workshops on "Earning Credit for Prior Learning" and "Financing Your Education" were offered three times each by members of ELAN, throughout the day. Information about CLEP, transfer credit (including military and training courses) and assessment of prior learning programs was included, as well as financial aid options for adults to consider.

Marketing

Publicity for the college fair included radio public service announcements, an interview with Janet Nagler on WGMS, an area classical radio station, press releases sent to at least 20 area newspapers, and flyers distributed to all libraries in Fairfax County, Virginia; Prince George's County and Montgomery County, Maryland; and the District of Columbia Library system.

One of the difficulties discovered by the publicity committee was that many local newspapers and radio stations do not broadcast unsolicited information.

The Washington Post was contacted on several occasions by the publicity committee in an effort to publish an article advertising the adult fair. We received no response, either because of the lack of time or because of lack of interest on the part of the newspaper. Finally in January, a free-lance writer was able to submit an article which discussed the portfolio development programs available in the Washington, D.C. area as well as each ELAN members' institution and telephone number. The response to the article was overwhelming at all ELAN member institutions; over 2,000 total telephone class were received from interested adults in one week. This would have assured success for the adult fair. However, this was three months too late to be of help to us.

Another problem faced was the expense of buying paid advertising which could not be covered by the low fees charged institutions for the fair. Libraries were, however, most helpful by providing space for flyers.

Results

Attendance of potential students was, unfortunately, very light - approximately 30 people attended. The publication of the Washington Post article in October rather than in January would have assured our success. Most adults who came attended at least one workshop and indicated that the information they received at the fair was extremely beneficial.

Attendance by institutions was outstanding. Of the thirty institutions invited, seventeen participated. ELAN members included:

The American University
Hood College
Howard Community College
Montgomery College
Prince George's Community College
Trinity College
The University of Maryland University College

Other institutions represented were:

- Bowie State University
- Capitol College
- The Catholic University of America
- Computer Learning Center
- Maryland College of Art and Design
- Mount Vernon College
- National College of Education
- Northern Virginia Community College
- Strayer College
- USDA Graduate School

Representatives from the institutions took advantage of the opportunity to introduce themselves, describe their programs for adults, and exchange information and catalogs. Several institutions/individuals became members of ELAN at the Fair.

Conclusion

ELAN members, too, can benefit from experiential learning. We realize that if a college fair is to be sponsored in the future, both planning and publicity should begin earlier.

In addition, either we would need to obtain a grant or we would need to increase the cost to each institution attending to allow for an advertising budget.

Most educators who attended expressed enthusiasm for participating again in the future if ELAN can provide increased publicity. Perhaps, if the above concerns can be worked out, a college fair for adults in the Washington area could become an annual event.

Although attendance by prospective adult students was light, ELAN is considering new ways to market this event if it is repeated in the future. The adults interested in entering or returning to college who did attend found a wonderful opportunity at ELAN's college for adults.

References

Cross, K. Patricia. "The Missing Link: Connecting Adult Learners to Learning Resources. Future Directions for a Learning Society. New York, College Entrance Examination Board, 1978.

Knowles, Malcolm, S. and Assoc. Andragogy in Action: Applying Modern Principles of Adult Learning. Washington: Jossey-Bass, 1985.

Tough, Allen. "Major Learning Efforts: Recent Research and Future Directions." Adult Education, 28,4, Summer 1978.

THE STUDY OF ADULT DEVELOPMENTAL PSYCHOLOGY AS AN EXPERIENTIAL STIMULUS TO ADULT DEVELOPMENT

Albert Erdynast
Roberta Romanoski
Donald W. Mc Cormick

Introduction

Developmental instruction refers to an instructional model which specifies relationships between the teaching and the learning processes. In this instructional approach, careful understanding of the students' framework is required of the instructor, who then needs to provide the type of knowledge and educational tasks which stimulate the students' further educational advance. Developmental instruction has as its aims: 1) the elaboration and enrichment of the individual's current level of thought; 2) the stimulation of his highest level capabilities; and 3) where appropriate, the stimulation of the next hierarchical level of thinking (Kohlberg, 1981; Rawls, 1971).

Taking Learning Seriously and Developmental Theory

This year's conference's theme question: "What if the university took learning seriously?" is also one of the most central questions in structural-developmental psychology's approach to higher education. Ever since Ebbinghaus' classic study in 1907, when memorized knowledge was found to disappear with time, it has been no empirical surprise to find that the more time that has elapsed since students have taken a particular course, the less they are able to recall what they learned. Unless the students use the acquired knowledge on a day to day basis, it will tend to be forgotten. So there's no point in trying to teach content or even to maximize coverage. There is little use in trying to achieve that which will not last.

Ebbinghaus' findings emphasize the point that significant learning is the kind of knowledge that makes a difference in how students think about factual and moral issues. It is the kind of knowledge that will not be forgotten. One such type of knowledge is formally characterized as a developmental change in the student's structures or forms of thinking. A developmental change meets three Piagetian criteria : it is a 1) transformational, 2) permanent, and 3) irreversible new structure of knowing and choice of values.

Albert Erdynast, D.B.A., Antioch University, Los Angeles, 13274 Fiji Way, Marina del Rey, CA 90292
Roberta Romanoski, M.A., Antioch University, Los Angeles, 13274 Fiji Way, Marina del Rey, CA 90292
Donald W. Mc Cormick, Ph.D., Antioch University, Los Angeles, 13274 Fiji Way, Marina del Rey, CA 90292

Kathy Y. and Gregory B., two adult students suggest they are each going through such types of changes in reflections they make after their completion of a course in Adult Developmental Psychology. The particular structural-developmental psychological theories emphasized in this course are those of Lawrence Kohlberg and Jean Piaget, along with the introduction of their theories for purposes of comparison of similarities and differences (e.g., the works of Robert Selman, Carol Gilligan, Jane Loevinger, Cheryl Armon, and Albert Erdynast). Social contract philosophies of justice, liberties, rights, obligations and duties, autonomy,freedom and equalities are brought into this course for the purpose of analyzing contemporary issues such as the abortion rights controversies and affirmative action policies by Supreme Court Justices.

Kathy says:

"I seem to have a new way to perceive things. It's not enough for me to take what someone says or writes about as fact. I want to know why they have taken that position, how they got there.

I enjoy challenging myself, seeing what I am capable of, and I have been pleased with the results. Understood through Rawls' Aristotelian Principle (Rawls, 1971), I am enjoying the exercise of my realized capacities, and this enjoyment is increasing the more the capacity is realized , or the greater its complexity. I am taking pleasure in doing something as I become more proficient at it, and I am drawn towards a greater challenge once I have achieved the lesser one.

There are some changes in my life. Certain friends whom I once found interesting, are not so any longer. I listen more, ask more questions, and I don't believe everything I see or hear. I find myself saying, "Well, maybe the article does state this or that, but where is the evidence to support what is written? How did they come to those conclusions.? And my appreciation of music has expanded since our studies of aesthetic development. I had to laugh the other night. I had a girlfriend over for wine and cheese, and I had put on some classical music while we talked. She finally asked if we could "turn it down," which was really "turn it off. "So I willingly obliged. It seemed so odd to have a different feeling about music than her. We've known each other for twenty years, yet this is the first time there was something new in my life that she didn't share. It was a very new experience. I think I have experienced personal growth as a result of this class."

Gregory summarizes his reflections in a similar vein. He says:

My social consciousness has been greatly enhanced and my awareness of my moral position and those of others on many issues has also increased. I have developed an increasing compassion for the rights of others. It was the awareness of the rights of others which first made me aware of how much the class had affected my own moral development, because I thought that if others had rights, then I had rights also. This understanding increased my self-esteem. I began to see myself in the terms of Rawls' various aspects of a free and equal person which is how I was now thinking about others. I noticed a much greater sense of equality between myself and others.

I have noticed, more readily, the articles in the newspapers which have to do with court cases and human rights. Such cases as that of the woman who shot her alleged rapist and was then convicted and sentenced to a two year term in prison for assault. My awareness and thoughts about such articles have taken an extreme turn. Previously, I would have not noticed such articles, been influenced by the potential bias of the press, and settled on premature, prejudicial judgment which would probably go along with the conviction. After having taken this course, not only is the bias of the newspaper in this particular case much more evident, but I am much more inclined to reserve judgment until I have read and assessed the article and have thought in terms of the moral claims of all included."

The kinds of changes that Kathy and Gregory refer to can be identified and also measured with additional information and appropriate instruments. The additional information is a set of data which they have provided through their responses to a battery of developmental questionnaires administered at two intervals, at the beginning of the course and then again at its conclusion. The battery elicits their responses in four developmental domains; intellectual development, conceptions of the good, justice reasoning and aesthetic development(see the table of the Four Domains of Human Development).

Central Premises

Developmental liberal education rests upon several central premises. One is the Piagetian concept of hierarchical development (Piaget, 1967). Each higher level is a more comprehensive and equilibrated structure than the previous one. The fundamental reason for upward movement from one level to the next is that each later level is more adequately able to address and resolve more complex and demanding problems. No developmental movement occurs when the individual can assimilate into his intellectual, affective, and valuing structures the factual, moral and aesthetic problems he is presented. However, when disequilibrium between the individual's experiences and his knowledge and valuing structures for understanding them does occur, these structures can yield or accommodate themselves to new structures which represent more adequate ways of understanding experience (Piaget, 1967).

A second major premise is that sequential development as a central aim of education focuses upon the long-range future consequences of education for the individual's development. Sequential development focuses

FOUR DOMAINS OF HUMAN DEVELOPMENT

Sense of Right and Justice	Conceptions of Worthwhile Final Ends, Aims, Interests, Attachments to persons and Associations	The Pursuit of Knowledge or the understanding of factual reality	Contemplation and Fashioning of Beautiful Objects
The Reasonable Rawls	The Rational Erdynast	The Real Piaget (with substages extended by Erdynast)	The Beautiful
Morality of Principles	Level 7 Full Autonomy	Substage 5 Original theory	
	Level 6 Rational Intuitionism	Substage 4 Evaluative Schools of Thought	
Morality of Association	Level 5 Complex Organizational Social Unions	Substage 3 Schools of Thought	
	Level 4 General Organizational Social Unions	Substage 2 Multiple Theoretical Perspectives	
	Level 3 Primary Groups and Social Unions	Level 4, Substage 1 Formal Operations Theoretical Perspectives	
Morality of Authority	Level 2 Self-Interest Instrumental Opportunism	Level 3 Concrete Operations	
	Level 1 Subsistence and Support	Level 2 Pre-logical Operations	
		Level 1 Sensori-Motor	

upon the full exercise of current highest level capabilities for the purpose of a) full experiencing of immediate *capacities in a fashion which also b)* develops platforms for the later attainment of higher levels. Development as the aim of education thus implies a focus upon learning experiences within the broad context of lifelong education. Such a focus on long-range development is ultimately synonymous with an emphasis upon the qualitative nature of the individual's educational experience. *Education as development is education as experience because the qualitative nature of the experience is defined by its implications for the individual's further development*. Experiences do not live or die unto themselves. The quality of experiences is reflected in their effect upon the quality of the individual's subsequent experiencing which can be either enhanced or reduced. Only some experiences are educative. Others, which are miseducative, are those which led to superficial interests and learning. (Dewey, 1938).

A third premise is that *education is not the direct transmission of knowledge and facts but rather the development of the forms of the individual's own active thinking abilities to other successive, increasingly more adequate forms*. One major reason why levels of thinking cannot be directly transmitted and explicitly taught is that general thinking an problem-solving strategies are constructed by the students while they are actively engaged in developmental problematic tasks (Kohlberg, 1969; Piaget, 1967). What is *knowledge* to the instructor is only *information* to the student if he does not utilize it adequately or if his previous ways of understanding are not transformed. Knowledge is the ability to comprehend and apply ideas adequately, and not just the ability to memorize or to recognize and recall them for examination. Information fades with time while knowledge structures are permanently available.

Developmental Instruction

As a particular educational model, developmental instruction is based upon a specific set of conceptions of: 1) knowledge and experiential learning; 2) the learning and teaching processes; 3) students' learning outcomes; and 4)the role and responsibilities of the instructor.

Learning, knowledge, and Instruction

Within this developmental perspective, *learning* is an active change in the individual's pattern of thinking and experiencing brought about by his involvement with problematic situations. All *developmental change, i.e., the individual's active reconstruction of new ways of thinking and experiencing*, is thus *experiential learning* whether it occurs in classrooms or in field studies. Unless such a type of change occurs in the individual no developmental learning has taken place. In order for learning to occur, it is essential that the individual be *actively engaged* in unresolved problematic situations and challenging tasks which stimulate his development to new, higher levels of knowledge. *Knowledge* is then defined as the individual's successive, increasingly effective interactions with the physical, moral and aesthetic world. (Gill, 1977; Kuhn, 1980; Piaget, 1967;

Kohlberg,1981) The instructor's role and responsibilities in such developmental instruction are to provide tasks and assignments matched to the students and their learning objectives. Thus developmental instruction as an instructional model and approach requires the incorporation of the following components in all educational situations:

1) Prototypical problems

Use of illustrative assignments which represent progressive, increasingly more complex problems of greater scope and complexity, developmental tasks and challenges,along with lectures and readings from related theoretical texts. Providing students with course assignments at developmentally different levels makes it possible for all students to not only attempt tasks at all levels, but also for each student to gravitate to his own level of challenge. A series of developmental tasks provides students with the opportunity to choose the ones on which thy want to work. Students can learn what they cannot do as well as what they can.

2) Active thinking

Engagement of students in active critical thinking, rather than in a passive, information memorization mode of learning.

3) Interaction

The central objective of classroom activities is a high degree of interaction among students and between students and faculty.

4) Exposure to One Level Above

The stimulation of problem-solving thinking and contrasts between each student's reasoning processes and those of others in order to stimulate development in the student's thinking toward progressively more advanced capabilities.

5) Evaluation

The focusing of assessment and feedback on the effectiveness of and weaknesses in the student's critical thinking processes and his abilities to apply theory to the solution of illustrative, practical problems.

6) Personal Experience

Incorporation of problems and issues from students' own personal experiences in order to engage them in problem definition and conceptualization phases as well as in problem solutions

References

Ebbinghaus, Henry." Memory, A Contribution to Experimental Psychology." New York Teachers' College, Columbia University, 1913.

Dewey, John. Experience and Education. New York: Macmillan Publishing Co., 1963.

Gill, John. "The Concept of Knowledge." In Piagetian Theory and Its Implications for the Helping Professions. Proceedings of the 7th Interdisciplinary Conference, Los Angeles, 1977.

Kohlberg, Lawrence. "Stage and Sequence: The Cognitive-Developmental Approach to Socialization." In D. Goslin (Ed.), Handbook of Socialization Theory and Research. New York: Rand McNally, 1969.

Kuhn, Deanna. "Developmental Theory and Education: A Current Appraisal." Harvard Educational Review, Fall, 1980.

Loevinger, Jane. Ego Development. San Francisco: Jossey-Bass, 1976.

Piaget, Jean. Six Psychological Studies. New York: Random House, 1967.

Rawls, John. A Theory of Justice. Cambridge: Harvard University Press, 1971.

INTEGRITY AND ADULT EDUCATION
OR
WHAT IF A UNIVERSITY WERE TO TAKE AN ADULT EDUCATION PROGRAM SERIOUSLY?

Joseph R. Hoff

Introduction

Historically programs of study designed for non-traditional students at the university-level have been perceived as marginal to or been excluded from the venues which feed and nourish the various constituent elements that comprise a university.

The decade that is upon us demands a new and fresh approach to the delivery of educational programs of the highest quality to the non-traditional student population which now represents the fastest growing segment of U.S. universities and colleges.

Saint Louis University, a private, medium-sized institution of higher education, has initiated a new approach to its adult education program with a view towards integrating it fully, both programmatically as well as resourcefully, into the broader context of the University.

Issues addressed in this presentation are balanced between theoretical considerations that require attention and practical considerations which demand solutions. These are grouped under the following headings:

I. Accessibility of Resources

II. The Integrity of the Andragogical Process within a Pedagogically-designed Curriculum

III. The Integration of the Adjunct Faculty into a Community of Full-time Faculty

Integrity

When two individual bodies come together, each brings with it its own agenda, its own predispositions, its own vision. If the two bodies decide to coalesce in a project or into a new entity, it means that each will need to exercise flexibility in devising a

---

Joseph R. Hoff, Ph.D., Academic Coordinator, Saint Louis University

common agenda, a common mission that is sensitive to and articulates the predispositions of both. That is, if both intend to retain their individual sense of integrity, which is essential if the newly-formed alliance or entity is to attain its own sense of integrity.

Integrity denotes the allegiance to a corpus of values. Integrity means, then, that one must be cognizant of the value system while, at the same time, acting only in accord with that same value system.

If we apply the above to a traditional university program and a university-level adult education program, problems immediately arise. The value systems of these two entities are different. The traditional university is by nature conservative whereas adult education programs are by necessity flexible and progressive (Beder, p. 5). The latter is necessarily responsive to the needs and interests and its constituencies, if it intends to survive; the former imposes on its constituencies what it considers necessary and appropriate. How, then, can two such diametrically-opposed theories operate together in a productive manner?

Saint Louis University chose to address this issue in 1989 when it took its adult education program, formerly an autonomous College within the University, and merged it into the College of Arts and Sciences, the oldest and most central of all the Colleges and Schools comprising the University. The result was the College of Arts and Sciences Evening Division. This new Division was issued a mandate to integrate fully into the life of the College and the University. This decisive move was undertaken to aggressively address the perception of a program that had fallen out of step with the quality of other programs and which had lost its sense of how it fit into the overall mission of the University.

The first issue to be addressed was the loss of autonomy while simultaneously seeking methods to gain a foothold in a College with an already well-defined mission and, from the perspective of an adult education program, a contrarily-defined mission. The autonomous model was replaced with a model of cooperation, the latter being chosen as the vehicle which would best allow for full integration.

But integration does not mean loss of identity, as pointed out above, but signifies maintenance of integrity within a new environment. It became the Evening Division's mission to articulate its values to a community of teachers and administrators whose knowledge of adult education was wanting. Below are detailed some of the means by which this was done.

Accessibility of Resources

With the attendant prestige of becoming a member of the College of Arts and Sciences, certain avenues were opened to the Evening Division. But in the attempt to make resources available to evening students and to work towards creating an environment where evening students were not to be considered "second-rate," a campaign was launched to present the students and the entire Division in positive terms, while undertaking significant structural and programmatic changes.

Adult education has traditionally been defined in negative and derivative terms: "non-traditional students taking different courses in an altered format taught by part-time faculty." Adult education has defined itself (or allowed itself to be defined) in terms of how it differs from other university programs. Tuition is less (with the assumption that if you pay less, you get less); classes meet only once a week rather than the traditional schedule of meeting three or four times a week (which results in the misconception that less learning takes place within the framework of an academic term); faculty hold primarily adjunct appointments ("adjunct" too often being interpreted as "subordinate, dependent").

A practical approach to defining adult education in positive terms is the positing of the students and the programs in as many dimensions of University life as is possible. The newly-created Evening Division worked and continues to work hard to open avenues for its students and faculty that will lead them toward (pro)active participation in clubs, societies, committees and boards. Such participation provides a voice for the Evening Division and the opportunity to challenge misconceptions regarding the nature of adult education and the academic integrity of those who participate in it.

Evening Division staff launched a major effort in "sensitizing" student service-related offices on campus, such as counseling, career development, advising, to extend their hours on a regular basis to encompass the early evening. At the same time, staff attempted to make other resources available, such as the development of challenging practica for evening students and creating the possibility for instructional sessions on technology information to be available at any time that students might need it.

As integral parts of universities, adult education components must begin to define themselves in positive terms. To do that means to have a clearly-defined value system and to articulate that value system in a manner that is fully integrated into the mission statements of our universities. That is the only means by which to attain and maintain integrity.

The Integration of the Adjunct Faculty into a Community of Full-time Faculty

Adjunct faculty frequently are viewed with skepticism and condescension by full-time faculty. Besides the most apparent reasons for this unwarranted suspicion, adjunct faculty rarely participate in one of the most respected of the triad of a faculty member's responsibilities: research. To tenured and tenure-track faculty, this missing component is considered anathema. But adjunct faculty are, in a very real sense, one of the richest resources of a University in that they: (1) help combat the documented effects of a predominantly-tenured faculty on a university by providing a constant stream of energetic, highly-motivated and innovative teachers; and (2) construct strong ties to the community since these faculty come from all walks of life in the community that immediately surrounds the University.

The adjunct faculty of the Evening Division are selected according to their academic credentials, their teaching experience, their understanding of the adult education processes, and their experience in the field in which they teach. Thus, the adjunct faculty bring with them to the classroom a unique blend of both theory and practice. Their theoretical knowledge base provides the theoretical foundations required within any university-level course, while their work experiences bring into the classroom the practical and applied dimensions of learning which adult students cherish.

On the other hand, the academic departments within the College of Arts and Sciences are often in need of adjunct faculty to staff additions to class schedules because of the influx of higher-than-anticipated enrollments. The adjunct faculty, then, become viewed as a resource, both vital and contributing to the educational delivery systems of the College as a whole.

The College, likewise, has much to offer the Evening Division and its faculty. The College has proven to be readily willing to offer assistance and participate in faculty selection, evaluation and development.

The cooperative model has led to a number of tenured, senior-level faculty agreeing to teach within the Division. Assignments of these faculty to core courses had smoothed the way for the Evening Division's next major project (outlined in the following section), that of the assumption of the College's core curriculum as its own.

Further, the full-time faculty have been enthusiastic about serving in a mentor-like capacity to their adjunct colleagues. They have expressed willingness and interest in assisting the adjunct faculty to keep abreast of trends in teaching, developments in the field as well as assisting in the more pragmatic tasks such as selection of texts and class delivery.

Operative throughout the meeting of adjunct faculty with full-time faculty has been a sense of reciprocity. Reciprocity is essential to any cooperative venture of this sort. Unilateral concessions breed a lack of respect. And a lack of respect can only impede the pursuit of integrity.

The Integrity of the Andragogical Process within a Pedagogically-designed Curriculum

A more difficult problem arose when the pedagogically-designed College of Arts and Sciences looked at the andragogical processes inherent in the Evening Division's programs. These two distinct approaches to the educational process, as they are currently defined and understood, are mutually exclusive. A compromise, if one were warranted, would mean losing the integrity of one of the two systems (due to their mutual exclusivity). It also calls into question implications for curriculum design. Is there such a thing as a pedagogically-designed curriculum as opposed to an andragogically-designed curriculum? Or are pedagogy and andragogy terms only applicable to the educational process. If the latter is so, a respectful compromise could be reached by the implementation of "cooperative learning."

Cooperative learning is a form of learning that can be used as effectively and affectively with traditional-age college students as it can be with the adult student. Cooperative learning is a highly effective means of dealing with the pervasiveness of knowledge compression in college courses. It allows for the development of analytical skills which remains as one of the hallmarks of a truly good liberal arts education. A sense of discovery is returned to the classroom. And it is exceedingly well-tailored to the adult student who, by nature, resists the authoritative presentation of material by an "omniscient" lecturer (Pringle, p. 47). Cooperative learning is sensitive to and provides a forum for expression of the experientially-gained knowledge of the student, and makes of the classroom an environment where the teacher can become student and the student can become teacher. In other words, the classroom is restored to its true function as a locus for dialogical interaction.

But this does not touch the thorny and problematic question of whether a curriculum designed for adults must look different from one designed for young adults. Within any program design in a university, there are two essential components: the core curriculum and the disciplinary curriculum. Each requires examination in light of this question.

The core curriculum defines the shared educational process of all students and "represents the collective wisdom of the faculty" (Hayes, p. 2). The arguments surrounding pedagogy and andragogy wane in the context of the universal applicability of the core curriculum. If the adult education program is to be integrated into the overall mission of a university, should not the core be extended to all adult learners? A graduate of one program of the university should leave with a liberal education that he or she shares with a graduate of any other program of that same university. Age differences and professional intentions should not exempt any student from this central function of a university education: that of being freed in order to understand the society and the world in which we live.

Whereas the disciplinary curriculum can be tailored specifically for different constituencies, baccalaureate degrees can be offered that are attractive to adults fully engaged in the work world and who seek to acquire the academic credentials necessary to professional advancement. Curriculum development must be sensitive to the needs of its audience; programs that are responsive to the needs of business and corporate America must be offered if universities' adult education programs are to survive.

But at the same time, adult education programs attract numbers of students who desire a true liberal arts education program. There is a cadre of adult students, perhaps unique in the realm of undergraduate education, who come to the University with a real desire to "learn for learning's sake." They pursue their programs of study in order not to be taught, and certainly not to acquire "vocational training," but to learn, to become "educated," in the true sense of that word.

So as integration takes place, and with a mind to retaining the integrity of its adult education programs, it seems possible that the Evening Division will accept the University's core curriculum, producing students who are educated "to be for others" while at the same time providing disciplinary-specific programs of study that are uniquely responsive to the adult learner's need for work place-specific knowledge.

Conclusion

It is still much too early to detect the effects of this integrative process, and it is certainly, then, presumptuous to declare it successful. But certain tendencies can be noted:

1. the programs of study are becoming stronger and more fully aligned with the programs of the College of Arts and Sciences;

2. the future of the adjunct faculty appears brighter as they begin to experience greater recognition by their full-time colleagues;

3. reciprocity is a dynamic reality; the more reciprocal relationships are established, the greater appear the possibilities for growth and development;

4. all of the above have combined to open up avenues of dialogues between what were, at one time, separated programs speaking different languages.

The initiation of this dialogue has caused a certain amount of self-reflection in both camps. Questions have arisen which demand answers, and the formulation of these questions is integral to the attainment of integrity.

The answer to the question framing this presentation and of this conference, then, is if a university is to take the concept of the non-traditional programs seriously, it will demand a great deal of reflection and hard work, but the results will be satisfying both to those who participate in the process as well as those upon whom the process will impact and for whom the process is meant to bestow benefits--the adult students.

References

Beder, H. Realizing the Potential of Interorganizational Cooperation. San Francisco: Jossey-Bass, Inc., 1984.

Hayes, A. "Toward a New Core Curriculum at Saint Louis University," Insight, November 1989, p. 2

Pringle, R. "Judging the Quality of External Degree Programs." In The Role of Faculty in Maintaining Quality. Washington, D.C.: American Council on Education, 1981.

EDUCATIONAL PLANNING:
IMMEDIATE GRATIFICATION/LIFELONG PROCESS

Michael J. Kiskis

"Non-traditional" and "interdisciplinary" are often code words for programs focused on adult students. Those three components - active questioning of traditional definitions of education, concerted effort to break free from the confines of disciplinary boundaries, and motivated and consumer oriented students - blend to offer students and faculty a potent mix of frustration and success. Most importantly, that mix stimulates opportunities (too often ignored) for both students and faculty to examine assumptions about and definitions of education by exploring personal and professional experience thick with theory and loaded with learning. If we are sensitive, we are pushed to define our selves in relation to personal and professional goals. We reflect on our own intellectual stamina and pose questions that help us design a plan to sustain active, participatory education. We confront ideas. We explore. If we are awake and watching, we uncover more questions than answers. And when that happens we know we are alive to education and immersed in educational planning.

At Empire State College educational planning is the only study required of all matriculating students. The general idea of the study is to cover a variety of tasks intended to aid students and faculty as they collaborate on a design for an individualized (sometimes idiosyncratic), academically sound degree program which assures the systematic planning of and evaluation for student learning. We attempt to control a potent and complex rhetorical mix of autobiography, research methods, and persuasive writing. Potent because of the goal that students recognize and remain sensitive to the sometimes conflicting roles they play in a variety of contexts (worker, spouse, parent, child, student; rhetorically complex since students submit their plan of study to their mentor, to the faculty, and to the college for review. The rigors of audience identification alone are both bewildering and electric.

The most promising programs are organically grown: their key nutrient is careful and deliberate thought aimed at giving students an opportunity not only to collect and help analyze evidence of their prior learning but to develop a degree which grows out of their present and future goals and out of their own reflection on their lives and the impact education may have on their lives. But that integrated vision is rare for our non-traditional students who are beginning or returning to an academic process. For most, the educational planning process begins when students

---

Michael J. Kiskis, Assistant Dean for Assessment, SUNY Empire State College, 28 Union Avenue, Saratoga Springs, New York 12866

break apart their personal, professional, and academic past to analyze where and whom they have been. It is an act of exploration and research - self exploration, self research, self analysis. We ask students to clarify their personal and professional goals, explore choices for life and career. And we ask students to identify and research the experiential and academic paths that lead towards those goals. Admittedly, the directions and prescriptions we offer may taint the ideal of organic design; however, even coaxed reflection may eventually stimulate an awareness of connections among studies and perspectives.

A quick review of an arbitrarily chosen group of educational planning contracts identifies several common tasks assigned to students: students investigate their prior learning (academic and experiential), begin to focus on a concentration for their studies (this is quite open - disciplinary and departmental boundaries are not enforced, though we do offer a series of area of study guidelines), review college catalogs, interview professionals, explore professional publications, design their program, and compose a rationale essay to explain the processes and reasons which affected their choices. Individual students may tackle additional readings (disciplinary or interdisciplinary) or do more writing in content areas (some choose to explore issues related to adult education). Students and faculty then discuss strategies and scenarios for matching goals with college requirements, professional demands, and personal expectations. Of course, we are ultimately concerned with one outcome - that students begin to develop an awareness of self and work to identify and gain some proficiency using the intellectual tools that will help shape that self over a lifetime. In short, that students are introduced to the demands and excitement of lifelong learning.

That excitement rises and falls even when it is sparked by serious reflection. Some students ignite, some smolder, some remain cold. For many this is the first (and for many the only) time when their own self becomes the focus for intellectual inquiry. They may never have entertained the thought that they have a separate self - many do not want to know they do and, in fact, protest all attempts to move them towards serious reflection. Some students come to us with a clear sense of self, a self that is often defined by clear - and perhaps unbending - professional and career goals - "I want to be an accountant, a manager, a human services worker, a counselor." For other students, self gains luster through exploring a full complement of studies - "I want to read, to explore, to taste, to experience." The spectrum runs from a pre-formed, solid, and unquestionable identity to a vague intellectual tug or yearning, from a mild interest to a quest. For most students, however, the reality falls somewhere between - "I want to be a manager, but I also want to be exposed to ideas." After all, man does not live by managing alone.

Obviously, then, there are times when immediate gratification (a raise, a promotion, a new job) confronts and eclipses the less tangible rewards inherent in a lifelong process of reflection and renewal (an identity separate from a job title, an awareness of diversity, a tolerance of others). Analysis moves students to understand themselves within a professional or academic or even personal context; however, atomizing their lives is often so insistent and persuasive a process that many students find it difficult to re-integrate themselves or recognize that synthesis is possible when informed by broad and deep reading and experience. They focus on immediate job prospects. It is more comfortable for them. But it can also be more comfortable for us, and that presents us with questions which aim at the heart of our idea of education. Like other programs focused on non-traditional, adult students, ours actively promotes student centered learning. But when does our student centered orientation lead to student control? And does student controlled learning necessarily lead to student dictated? It is important that students get what they want? Or is it important that they get what they need? And who decides. And how. All good questions.

The answers need to come from our own reflection. We ask students to place themselves on an educational continuum - to anchor themselves in the present and then look back to their past so that they can prepare to look towards their future. But we should not ask our students to undertake a task - especially so difficult a task - when we are reluctant to reflect on our own personal and institutional past. We should not ask students questions which we are unwilling or unable to face.

Having said that, it is important to turn to those questions again not to provide specific and lasting answers but to become more aware and more sensitive (asking the questions really is more important than giving the answer; reflection is more important than absolute assurance). What comes out of these ponderings should lead not to a series of codified pronouncements but to a more energetic and, perhaps, a more intellectually courageous self examination of our individual and institutional role in the educational process.

One goal of the student centered program is to move students from a dependence on faculty (mentor, tutor, instructor) to independent learning. We have all travelled that road during our own learning careers and can, with some careful reflection, recall the increased self esteem and sense of accomplishment we felt as we developed an ability to read the map of our chosen disciplines and to head outward, test the borders, and in the words of Huckleberry Finn, "light out for the territory." Our students can experience that same exhilaration - or at least some of our students can (we need to acknowledge that not everyone is spellbound by the fire of ideas, but that is the subject of another paper).

Intellectual self direction, however, is rarely instantaneous and should not be confused with a motivated and single minded career goal. The idea of independent learning assumes a transition period - and in the opening rounds, faculty have a clear responsibility to remain in control of and exert an influence over the basic direction of student work. The fact that we use student interests, concerns, and goals to identify specific learning tasks does not assume that students come to us with a clear sense of any or all of these. Appealing to individual interests is an effective way to excite students and tease out other choices: for example, a student interested in business administration is pulled towards studying literature and creative writing; a student who intends to study literature becomes fascinated by computer technology and its applications; a student with a wealth of experience with data collection and transmission turns to political science and international/comparative politics. These students primed their academic interest with career hopes and experience; they came to us with little distinction between academic and career plans. Faculty supplied initial support and guidance. Options became clear during and after discussions with faculty.

Faculty, then, carry an increasingly heavy burden: individualized education demands more time, a breadth of training, and a willingness to redefine areas of specialization. Time is at a premium - time to read, to write, to recuperate. And it is often tempting to gain time by giving students increased responsibility for arranging for their own studies and finding their own resources. That, of course, is what self directed, independent learners do. But it can also be used to release some of the pressure on the institution - especially in times of diminishing resources and increasing demands. Students have been asked to locate potential tutors for studies outside the territory of expertise covered by our own faculty, have been asked to seek out specific (usually rather esoteric) learning resources, and have even been brought into the process of locating experts to help evaluate prior learning for college credit. Unfortunately, the goal of encouraging students to become independent can become a remedy for our own discomfort. Some of us learned to swim by being thrown into deep water. Asking students - especially inexperienced students - to take full charge of their education is throwing them into deep water. Some do learn to swim and thrive on the challenge; some become terrified of the intellectual waters and refuse to swim again; some drown.

Even the most responsible and more experienced student benefits from collaborating with faculty. That collaboration offers an opportunity for both to gain new and often advantageous insights. Much is lost to us when we decide that independent, self directed learning is analogous with solitary learning. The analogy denies that education is at heart a social activity, a socializing process. It also allows us to divest ourselves of the responsibility we carry for watching over the education of our students. As faculty we do carry a substantial burden, but shifting that burden to our students, allowing them to take full control of their educational programs, or acquiescing to their demands for an immediate return from their learning is ultimately both unfair and dishonest - for our students and us.

If we are going to take our positions as educators seriously, we need to reclaim and hold the responsibility we chose. Perhaps one of the basic conflicts we face is between taking ourselves seriously and taking the work we do seriously. There is a difference. Too many of us have decided that we like the pose of educator and pursue that pose energetically. We need not take ourselves so seriously. We need to take the work of education seriously. That will make it easier to invite students to become active participants, active learners and enable us to take more confident and more effective steps to assure their success. Our focus throughout is on students, and our programs are in theory and (for the most part) in practice student centered. We have managed to question and to some extent divest ourselves of the primacy of "field" inherent in disciplinary perspectives; likewise, we have moved to replaced the lecture (which is often more an end in itself, an opportunity to take on a role) with collaboration. That has presented us with myriad possibilities.

Both students and faculty play an active role in this process. Both are educators. They confront a range of challenges, challenges which should force them to explore difficult questions: what is learning? how can it be supported? how can it be verified? how should it be evaluated? The excitement, the play begins as students consider options and make choices. But those choices must be informed. Faculty must make a concerted effort not only to load students' time with academic tasks and plot out the various routes through those topics but also to recognize and remain sensitive and faithful to our own intellectual odyssey. As faculty (and I include many administrators under this umbrella), our job is to guide. To mentor. To present and discuss options. To advise, coax, push, and lead students to (and sometimes through) the thickets of intellectual inquiry. But we should encourage students to take the lead. Ideally we begin as guides but are later treated to new vistas opened by energetic students. And often the path allows two to pass side by side.

In the end, educational planning is not only for students. It is for faculty too. Students will become active in and activists for their education when they see the choices open to them. And educational planning must challenge students to see those choices. It is important for students to be able to place themselves within a career matrix. They should be familiar with professional expectations. But they must also be prompted to be curious about their and tolerant of other cultures. The differences must be displayed before them and made tasty. Too often the comfort of career paths and the blandness of professional credentialling takes the place of true curiosity and intellectual exercise. Yes, students need to know what their immediate gains might be - but they must also be introduced to discipline, to patience, and to tolerance.

More than all of that, the process of educational planning must be resurrected so that faculty peel back some of the layers of utilitarian and fast-track promises. Education is not easy, and we must not pretend that it is. We must be wary of making it so easy that students ultimately discount the value of the quest and come to us for a quick career fix. We must reflect on our role as educators. Whether we call ourselves teachers or mentors or educators or administrators, we must have a uniform vision of the basic demands that we will place upon ourselves - to guide not only by edict (perform this or that task) but by example (how many of us share our own research and writing with our students?) And to guide also means to be guided. We must allow ourselves the freedom and be comfortable enough with our own selves that we encourage students to help us along to new ways of thinking and new ways of seeing.

After all, if we are to introduce students to the context within which they live and to their responsibility for becoming agents of change within that context (a goal which should inhabit the hearts of self reflective citizens everywhere), we must be agents of change. We must choose to offer opportunities for literacy and choose to develop programs that invite us and our students to reflect rather than react, to study rather than storm.

TAKING LEARNING SERIOUSLY: FROM COMPETITION TO COLLABORATION

Paula E. Peinovich

The Context for Collaboration

Twenty years ago, degree programs which were designed to serve adults were considered non-traditional by the higher education community. At the same time, the flagship external degree programs such as Regents College and Thomas Edison State University were developing as non-traditional options to these non-traditional degree programs, bringing with them the concept that value-added learning can take place in many diverse settings. As the American economy has awakened to the realization that it is not globally competitive, nudging education broadly from a process to an outcomes paradigm, value-added education has found acceptance as a policy concept; however, the serious focus on learning that must attend such a paradigm shift has yet to be clarified in the higher education community.

The explosion of lifelong learning during the last twenty years, and the demographic take over of higher education by adult learners has convinced virtually all post-secondary institutions to develop policies, practices and programs to graze a continuing education cash cow in at least one of their pastures. This has made campus-based non-traditional programs quite traditional, concerned with competing for resources from within and students from without.

While much obviously remains to be done to facilitate adult learning, particularly at the federal and state policy level, this work as it is currently defined in those arenas will bring it further into the mainstream, making it traditional. **Breaking the Mold**, a report released in January, 1990 from the Pew Higher Education Research Program based at the University of Pennsylvania, Institute for Research in Higher Education, makes this clear. It calls for "a shift away from the traditional view of a college education as primarily an intellectual coming-of-age, toward one that recognizes higher education as a continuing engagement with new knowledge and understanding throughout one's life." What is missing in this challenge is the sense that learning for adults is not the exclusive domain of higher education.

Paula E. Peinovich, PhD, Chief Academic Officer, Regents College, Cultural Education Center, Albany, New York 12230

In **All One System**, Harold Hodgkinson asked us to look at all levels of education, from Head Start to doctoral studies, through the eyes of the learner passing through the system, and to build linkages and collaboratives based on the view that education is a continuum, not a collection of discreet organizations, each with its own mission. In his most recent monograph, **The Same Client**, he asks us to look at all the social systems which simultaneously impact the lives of adults, again challenging us to look at those systems through the eyes of the clients who are both overserved and underserved because these systems are not articulated to meet their holistic needs, but designed as stand-alone and often competitive systems, each with its own purpose.

If the education of adults is to be facilitated as broadly as Morris Keaton claims it must, there are approximately 30 million learners left to be served. The mainstreaming of a continuing higher education agenda, such as suggested in **Breaking the Mold**, may be necessary, but it is not sufficient to accomplish this task. The focus on learning needs to be clarified, and collaboration not only between levels of education on the continuum, but among a variety of higher education institutions must begin in order to accomplish what remains as probably the most significant work of the lifelong learning movement, namely the broadening of the demographic base of adult learners.

In the 70's, higher education's collective consciousness was raised about the need to educate adults. In the 80's, continuing educators learned that they needed to collaborate with a variety of educational providers outside the academy in order to remain competitive enough to provide adults with appropriate educational opportunities. In the 90's they need to look to each other in order to press ahead with what is the only non-traditional thing left to do for adults, to facilitate value-added learning. The traditional agenda of institutional survival will be equally well served, and the societal need for a globally competitive economy will be met because the demographic base of those who are enfranchised in the educational system, and thus productive members of the workforce, will be broadened.

The Need for Collaboration

Adult learners have the need to have their prior college level learning acknowledged, unrelated to the setting where they achieved the learning; they have unmet learning needs which must be fulfilled; and they often have the need to document the accomplishment of learning through an educational credential for advancement in their careers.

Campus-based adult degree programs are often positioned to meet all these needs through assessment of prior learning programs, and through a variety of degree programs offered at convenient times and places. However, because even the most flexible and enlightened policies and schedules are designed for the majority rather than the individual, continuing educators find themselves turning learners away because of specific institutional policies about residency requirements, acceptance of extra-institutional learning, course scheduling limitations, or curricular requirements.

If the demographic base of higher education is to be broadened, it is the learners who are not in the majority, but who find themselves on the fringes of the bell shaped curve of congruence with the current educational system who need to be enfranchised. Turning them away from one institution because they cannot be appropriately served can mean leaving them out all together, thus contributing to an increasing bimodality in the literacy and productivity of the adult population, and a decrease in the competitive position of the U.S. economy.

A focus on the learning needs of adults who are turned away from campus-based programs might suggest that referring them to external degree programs will not only enfranchise them in the system, but meet some of the resource needs of campus-based programs which drive them to compete with their colleagues for students in the first place.

External degree programs typically offer the complete flexibility of no residency requirements, very generic curricular requirements, and sophisticated methodology for evaluating extra-institutional learning. However, they also typically deliver this expertise to students at a distance, and are not able to provide the kind of developmental and enabling face to face instruction, support, advising, and counseling which adults require to fulfill their unmet learning needs, at whatever level they occur.

Collaboration between the two kinds of degree programs could create a system which focuses on meeting all the learning needs of adults simultaneously and holistically, recognizing their prior college level learning, providing education for their unmet learning needs, and creating a channel for them to complete the necessary credentials needed to advance in careers. The strengths of each program can be linked in a variety of creative ways to serve the same learner.

The Nature of Collaboration

A case study of Regents College of the University of the State of New York, the largest external degree program in the United States will be illustrative of the nature of collaboration between campus-based and external degree programs for adults.

Regents College, approaching its 20th anniversary, is non-instructional, but serves over 15,000 learners throughout the world. It offers sixteen different degree programs in the liberal arts, and in the professions, each designed with broad, curricular requirements which can be fulfilled in a variety of ways. Its strengths are the flexibility of the degrees and the reliability and validity of its assessment and evaluation methods, both of which have been acknowledged by regional accreditors and the American Council on Education (ACE).

Adult learners make progress toward a degree at Regents College by:

- transferring either direct instructional or correspondence credit from regionally accredited institutions, as recognized by the Council on Postsecondary Accreditation

- transferring credit earned through the military as evaluated and recommended by the American Council on Education

- transferring credit earned through corporate or industry based training as evaluated and recommended by either New York National or the American Council on Education Program on Noncollegiate Sponsored Instruction (PONSI)

- transferring credit earned from a variety of sources which have been evaluated by Regents College through special articulation agreements

- taking written and/or performance examinations developed and administered by Regents College or other national examination programs accredited by a regional accrediting body or by the American Council on Education

- participating in the assessment of prior learning through special assessment processes designed to meet individual learning needs.

As an evaluation and assessment institution, the college has special expertise in evaluating not only the sources of creditable college level learning, but the specific outcomes of that learning.

For instance, it is the largest single user of ACE credit recommendations for military education and training, evaluating close to 30,000 credits each year, the equivalent of 2000 FTE students. Active duty soldiers as well as retired soldiers and veterans often find themselves turned away from campus-based adult degree programs because the local college does not accept military education, because it puts a cap on the amount of military credit or extra-institutional credit which can be applied to a degree, or because it does not have the technical expertise on its staff to appropriately evaluate this kind of learning.

Soldiers anywhere in the world can enroll in Regents College where they receive a sophisticated evaluation of their military learning, apply it to one of the flexible degree programs, and still attend the campus-based program at a local college to fulfill the unmet learning needs they have to complete the Regents College degree. This kind of collaboration focuses on the needs of the learner, capitalizes on the strengths of each institution, capturing efficiencies in the system by avoiding duplication of learning, and maximizes the time learners spend adding value to their education, and gaining the necessary credentials to advance in their military or civilian careers.

As another example, adults who are well served by campus based degree programs in one location often find that travel or transfer requirements of their jobs foreclose the completion of a degree, sometimes just when the end is in sight. Transferring to another college in the new location will mean duplication of learning because of meeting new residency requirements. Instead of dropping out or investing resources in education which is by definition adding no value except the possibility of a credential, these adults can enroll in Regents College, transfer all of their previous credit, and still attend a campus based program in the new location to complete Regents College degree requirements.

Companies, and indeed whole industries, have their training programs evaluated by the American Council on Education for college credit in order to encourage the educational advancement of their employees; many of these companies contract directly with Regents College to offer degrees on site because of its flexible programs and expertise in evaluating and accepting PONSI credit. As a part of these contractual arrangements, Regents College will assess the unmet learning needs of the employee group and work with the company to identify a local college who will deliver instruction on site. Business and industry views the college as a curriculum broker, providing the framework for their employees to maximize their past learning and continue on to become more literate and productive members of the workforce. Their experience has been that employees go on to enroll in more courses at local colleges while they are completing a degree through Regents College at their work site.

In the process of their development, adults often experience false starts in their post-secondary education, attending many institutions for a course or two, and/or performing poorly academically and then dropping out, only to go back to try again later, sometimes interspersing college attendance with military or industry based training. The collection of transcripts which they have to chronicle this development does not usually show a direct path to a degree, but rather a pattern of growth that adds value to their lives at many junctures. The documentation of this growth, however, does not match the traditionally accepted standards of higher education, and the very adults who could add the most value to their lives by continuing their education are excluded because of institutional policies, practices or simply the lack of staff time or expertise to evaluate the learning. Regents College assists adults in consolidating this learning onto a single accredited transcript, recording the experiences in a coherent format which maximizes the growth and focuses on the outcome of value added learning.

This is a service that the college performs for its own students, as well as students matriculated in degree programs at other institutions in order to increase access to higher education. Instead of investing time in getting institutional policy approval to accept learning from many extra-institutional settings and then hiring and training staff to perform what are frequently highly complex evaluations, a campus-based degree program could seek institutional approval for a policy collaborative with Regents College on the evaluation of prior learning, and then refer students who cannot be served by the regular institutional policies to Regents College where they will have their prior learning evaluated and consolidated onto a single transcript from a regionally accredited institution.

The nature of collaborations such as these is that, while they facilitate obtaining credentials, which is certainly a commonly felt and often expressed need among adult learners, they militate against credentialism by maintaining that the means to a degree is, indeed, more important than the degree itself. Adults should not have to go through a variety of duplicative and therefore valueless experiences in order to obtain a degree, but rather should pursue degrees which the entire system of continuing higher education affirms add value to their lives. The addition of that value is more important than any individual institutional policies or curricular requirements only if institutions take learning seriously.

The Value of Collaboration

There are some very short term rewards for both kinds of institutions entering into collaborative rather than competitive arrangements. The campus-based programs stand to gain FTE students who will take their courses and consume institutional services even though they are matriculated with Regents College; unless an institution has reached capacity in its ability to serve adults in its course schedules, this should be of value to program viability, broadly. External degree programs also will increase enrollments because they will be able to serve the students who campus-based programs refer.

Collaborating with external degree programs, in fact, can be almost like adding staff for the campus-based programs. By understanding in depth the services and processes of an external degree program, and by establishing a working distance relationship with its staff, campus-based programs can recruit students and provide them with additional options to have their extra-institutional learning evaluated and transcripted, both of which are expensive, labor intensive operations for any continuing education program, no matter how big or small.

Thus, collaboration extends the capacity of both kinds of programs, allowing time for long term benefits to be captured in the system. First, and foremost among these, the demographic base of learners served can be increased, and continuing higher education will be contributing to a progressively more equitable distribution of literacy and workforce competency instead of increasing the regressive educational bimodality of the population broadly. We will begin to penetrate the cohort of those 30 million adult learners who are waiting to be enfranchised. Certainly there is enough business to go around to all kinds of adult degree programs when the focus is on learning.

Secondly, the efficiency of the system will increase because learners will not repeat learning they have already acquired, and institutions will neither duplicate services, nor will they be called upon to provide services which are cumbersome for them or out of their range of expertise and thus expensive.

More important, however, than efficiency is the quality of the enterprise. Maintaining high quality programs for adults to have their prior learning acknowledged and documented, and their unmet learning needs fulfilled is no longer a non-traditional concept to the higher education community. However, the paradigm shift from a process model of higher education to an outcomes model is incomplete. With the focus on learning instead of institutional survival, and with institutions collaborating to make appropriate contributions to the overall system based on their expertise, the shift to value added education can progress. Taking learning seriously, then, remains non-traditional agenda for continuing higher education until the paradigm shift is complete.

References

Hodgkinson, Harold. All One System. Washington, D.C., Institute for Educational Leadership, 1985.

---, The Same Client. Washington, D.C., Institute for Educational Leadership, 1989.

Policy Perspectives. "Breaking The Mold." Philadelphia, PA Pew Higher Education Research Program, January 1990.

A STUDY OF FACTORS THAT AFFECT ACADEMIC PERFORMANCE

Michael J. Pierson
Christopher J. Frost
Oscar L. Dorsey

Introduction

There has been a great deal of interest among educators about what constitutes good teaching and the factors that significantly impinge on the academic performance of students. Most of the research on teaching and learning of adult students accumulated during the last two decades has been inconclusive. The uncertainty surrounding the teaching--learning connection is the focus of this research. This study identifies and defines the underlying dimensions of teaching and learning behavior in an academic environment.

Related Research

Educational research has started focusing on the interaction of teaching and learning styles. Research on teaching and learning styles seems to indicate that academic performance is enhanced when styles are matched (Dunn & Dunn, 1979). Other research (Pierson, et al., 1989a) indicates that the effectiveness of matching is influenced by age. The lack of effect on students older than 25 years of age may be due to their broader experience base. Dunn and Dunn (1979) also feel that it is easier to teach instructors to respond differentially to learning styles than to match students and instructors.

Turner (1979) argues that an important element in the educational environment is the variability of teaching and learning styles. He feels that students should be forced to adapt to a variety of teaching styles. This position is consistent with prior research that suggests academic performance is enhanced by the instructor varying their teaching style (Pierson, et al. 1989b).

Michael J. Pierson, Professor, Occupational Education, Southwest Texas State University, San Marcos, Texas, 78666
Christopher J. Frost, Assistant Professor, Psychology, Southwest Texas State University, San Marcos, Texas, 78666
Oscar L. Dorsey, Professor, Curriculum and Instruction, Southwest Texas State University, San Marcos, Texas, 78666

The problem of providing a learning environment that is individualized and meets the needs of students has been with us for some time. Specification of the most critical teaching and learning factors is essential for educators to maximize the academic performance of students.

Methodology

Subjects were selected from a wide variety of educational climates, ranging from freshmen to senior level classes in traditional and nontraditional academic programs at Southwest Texas State University. A total of 722 students were selected for the research.

The plan for the study was to obtain measures on a large number of teaching and learning behaviors. Two instruments were used to describe these behaviors. Kolb's (1976) Learning Style Inventory (LSI) was used to describe the learning modes and styles of students. The Teaching Style Inventory (TSI) was used to describe the teaching modes and styles of faculty. Additionally, the Principles of Learning Scale (POLS) was used to determine faculty orientation from andragogical to pedagogical.

The LSI was used to determine the dominant learning style of the students: converger, diverger, assimilator, and accommodator. The LSI also identifies the students' preference for four learning modes (abilities): concrete experiences (CE), reflective observation (RO), abstract conceptualization (AC), and active experimentation (AE). By using two combination scores, AC-CE and AE-RO, learning styles were identified (Table 1).

Table 1
Student LSI Scores

			Learning Mode Score								Learning Dimension Score				
			CE		RO		AC		AE		AC-CE		AE-RO		Learning
Variables	N	%	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	Style Type
Male	285	39.8	14.81	2.79	15.07	3.81	16.75	3.56	15.52	2.75	1.87	5.39	0.44	5.39	Diverger
Female	431	60.2	15.83	2.96	15.59	3.38	15.73	3.29	15.35	2.91	-0.09	5.23	-0.23	5.32	Diverger
18-25	574	80.2	15.43	2.86	15.75	3.43	15.96	3.33	15.20	2.83	0.52	5.06	-0.55	5.33	Diverger
26-up	148	19.8	15.38	3.26	13.90	3.24	16.90	3.77	16.27	2.78	1.43	6.40	2.39	4.80	Diverger
Espanic	99	13.8	15.03	3.09	15.62	3.46	16.09	3.60	15.29	2.77	1.09	5.36	-0.32	5.10	Diverger
Black	32	4.5	15.36	3.54	14.94	4.04	16.44	2.79	15.58	2.89	1.09	5.63	0.66	6.04	Diverger
Oriental	4	0.6	16.75	4.35	14.25	1.71	18.00	3.74	14.50	2.52	1.25	7.59	0.25	4.03	Diverger
White	580	81.0	15.49	2.87	15.37	3.45	16.11	3.45	15.44	2.88	0.59	5.36	0.07	5.38	Diverger
Total	722	100.0	15.43	2.95	15.36	3.47	16.15	3.43	15.40	2.85	0.70	5.38	0.43	5.34	Diverger

The TSI was developed to determine the dominate learning modes and teaching styles of faculty. The instrument was developed using the same learning mode and style categories as the LSI. Like the LSI, it is an inventory which asks faculty to rank order sets of words in terms of how they teach. Table 2 displays the data from the TSI.

Table 2
Faculty TSI Scores

			Teaching Mode Score								Teaching Dimension Score				
			CE		RO		AC		AE		AC-CE		AE-RO		Teaching
Variables	N	%	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	Style Type
Male	8	72.7	12.63	4.29	12.25	4.23	17.13	1.46	15.88	4.22	4.00	5.26	3.63	6.99	Converger
Female	3	27.3	17.33	6.66	14.00	5.57	17.67	4.16	13.67	1.53	0.33	10.50	-0.33	6.81	Diverger
26-33	4	36.4	19.00	4.97	10.50	2.38	16.50	3.00	13.75	2.63	-2.50	7.56	3.25	4.27	Accommodator
34-41	4	36.4	15.75	4.03	12.75	4.86	18.00	2.45	15.00	2.45	2.25	6.19	2.25	6.95	Diverger
42-49	1	9.1	10.00	–	16.00	–	17.00	–	19.00	–	7.00	–	3.00	–	Converger
50-57	2	18.2	12.00	1.41	15.50	7.78	17.50	0.71	17.00	8.49	5.50	2.12	1.50	16.26	Accommodator
Black	1	9.1	19.00	–	10.00	–	18.00	–	14.00	–	-1.00	–	4.00	–	Accommodator
White	10	90.9	13.40	4.90	13.00	4.55	17.20	2.35	15.40	3.92	3.40	6.78	2.40	7.20	Assimilator
Master	1	9.1	10.00	–	16.00	–	17.00	–	19.00	–	7.00	–	3.00	–	Converger
Master +	2	18.2	15.00	5.66	15.50	7.78	18.00	0.00	12.50	2.12	3.00	5.66	-3.00	9.90	Diverger/ Assimilator
Doctorate	4	36.4	16.75	5.38	13.50	4.51	16.75	3.50	15.25	2.36	0.00	8.83	1.75	6.85	Diverger
Doctorate +	4	36.4	16.50	4.80	9.75	1.71	17.50	1.92	15.75	5.44	1.00	6.06	6.00	6.27	Accommodator
Total	11	100.00	15.73	4.78	12.73	4.41	17.27	2.24	15.27	3.74	1.55	6.49	2.55	6.85	Diverger

POLS is a modified version of Conti's (1985) Principles of Adult Learning Scale (PALS). It is a self-scoring instrument that assesses faculty according to seven orientations: learner centered, personalized instruction, relating to experience, assessing student need, climate building, participating in the learning process, and flexibility for personal development. Table 3 displays this data.

Table 3
Faculty POLS Scores for Factor Variables

			Learner Centered		Personalized Instruction		Relating to Experience		Assessing Student Needs		Climate Building		Participating in Learning Process		Flexibility for Personal Development		Overall		Instructional Orientation Type
Variables	N	%	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	
Male	8	72.7	40.5	5.71	25.0	5.90	24.1	3.36	16.6	3.11	16.8	2.38	11.1	4.02	15.9	3.18	149.9	16.38	Andragogic
Female	3	27.3	38.3	9.29	27.0	6.56	19.3	4.16	11.7	2.89	13.3	2.52	9.3	3.79	13.3	3.22	135.0	6.66	Pedagogic
26-33	4	36.4	44.8	6.70	30.0	4.24	23.8	3.30	13.5	4.04	16.0	2.16	12.3	3.40	16.8	4.50	157.0	16.78	Andragogic
34-41	4	36.4	39.3	5.56	22.0	1.41	20.5	8.03	16.5	4.36	14.3	3.30	7.8	2.63	14.0	2.83	144.5	10.50	Pedagogic
42-49	1	9.1	31.0	–	16.0	–	22.0	–	19.0	–	19.0	–	8.0	–	13.0	–	128.0	–	Pedagogic
50-57	2	18.2	41.0	2.83	28.5	6.36	25.0	1.41	15.0	1.41	17.0	2.83	14.5	3.54	15.5	0.71	156.5	13.44	Andragogic
Black	1	9.1	41.0	–	22.0	–	24.0	–	20.0	–	18.0	–	10.0	–	14.0	–	129.0	–	Pedagogic
White	10	90.9	40.6	6.70	25.9	6.01	22.5	4.43	14.9	3.60	15.6	2.84	10.7	4.06	15.3	3.40	147.5	14.84	Pedagogic
Master	1	9.1	31.0	–	16.0	–	22.0	–	19.0	–	19.0	–	8.0	–	13.0	–	128.0	–	Pedagogic
Master +	2	18.2	40.0	1.41	27.5	7.78	25.0	1.41	18.0	2.83	18.5	0.71	13.5	4.95	15.0	1.41	147.5	26.16	Pedagogic
Doctorate	4	36.4	41.0	7.17	24.8	5.68	20.0	5.72	14.0	4.55	13.0	2.16	8.3	3.30	14.8	3.20	151.0	3.27	Andragogic
Doctorate+	4	36.4	43.5	6.35	27.8	4.50	24.3	3.10	14.5	3.32	16.5	1.29	12.3	3.40	16.3	4.57	155.0	19.48	Andragogic
Total	11	100.0	40.6	6.35	25.6	5.82	22.6	4.23	15.4	3.75	15.6	2.79	10.6	3.65	15.2	3.25	148.7	15.67	Pedagogic

Data on the demographic characteristics of students and faculty were collected, as well as end of course grades and cumulative GPAs. Grades were used as measures of the amount of learning demonstrated during the semester.

Analysis of Data

Descriptive Data

Data on the 33 variables of 722 students and 11 faculty were analyzed by calculating product-moment correlations, a principals-components analysis, and a rotated factor matrix. Students in the research were predominately female, 18-25 years of age, white, and their learning style type was diverger (Table 1). The faculty members in the study were generally male, 26-41 years of age, white, and their teaching style type was diverger (Table 2). Additionally, the faculty members were categorized according to their instructional orientation. Generally, their instructional orientation was pedagogic (Table 3).

Intercorrelation Matrix

Table 4 presents the intercorrelation of selected variables. Most of the variables were interrelated. It is important to note the variables that correlated with student age. Grades were positively influenced by age beyond the 0.01 level of confidence. Also, age of student negatively correlated with the faculty member's teaching style beyond the 0.01 level. This seems to indicate that as age increases teaching style is less important. Due to experience, older students may adapt to teaching styles better than younger students. Lastly, the faculty members' instructional orientation negatively correlated beyond the 0.01 level with age. This strong relationship indicates that as age increases, students move toward pedagogical orientations.

Table 4
Intercorrelation Matrix for Selected Variables*

Variable	1	2	3	4	5	6	7
1. Student's age		-.1194	-.0956	.2384	-.0834	-.2760	-.4528
2. Student's sex			.0990	-.0201	-.1566	.1081	.1662
3. Student's ethnicity				.0822	-.0730	.0724	.1417
4. Student's grade					.0482	.1472	-.0558
5. Student's learning style						-.0312	-.0169
6. Faculty's teaching style							.4390
7. Faculty's instructional orientation							

*r = .0447 significant at the .05 level
r = .0584 significant at the .01 level

Factor Analysis

The latent root or eigenvalue for the factor analysis was set at unity. Therefore, only those eigenvalues greater than one were considered as common factors. The factor analysis yielded eight factors with an eigenvalue greater than one. These factors accounted for 81.8 percent of the total variance (Table 5).

Table 5
Factors for the Factor Analysis

Factor Number	Eigenvalue Value	Percent of Variance	Cumulative Percent
1	8.90	21.2	21.2
2	5.02	17.0	38.2
3	4.29	13.0	51.2
4	3.12	9.5	60.7
5	2.24	6.8	67.5
6	2.13	6.4	73.9
7	1.56	4.7	78.6
8	1.04	3.1	81.8

Table 6 displays the commonalities (h^2) of the factor solutions. Commonalities are the proportion of the variance for the original variables which were preserved in the factor solution. The commonalities of the variables ranged from .265 to .998. The students' sex and ethnicity were the most unique of the original variables analyzed.

The rotated factor matrix is reported in table 6. Only factor loadings greater than .400 are reported. None of the variables failed to load on any of the eight factors. Factor one is related to faculty and accounted for 21.2 percent of the total variance. It is defined by bipolar variables that describe teaching style and instructional orientation of faculty. The positive end of this dimension is AC-CE and the negative end is CE. This factor can be described as abstractness versus concreteness in an environment that is not learner centered.

Factor two is bipolar and accounted for 17.0 percent of the variance. It is also described by the teaching style and the instructional orientation of faculty. The positive end of this factor is RO and the negative end is AE-RO. This factor presents a pattern of reflection versus experimentation. The positive dimension of this factor is accompanied with personalized and participatory instructional orientations.

Factor three has high bipolar loadings on the demographic characteristics of faculty (sex and age) and their instructional orientation. This factor accounted for 13.0 percent of the variance. Both poles of this factor were difficult to reconcile. This factor can be described as the relationship between faculty age and the ability to structure a classroom climate that is participatory and relates to student experiences.

Table 6
Rotated Factor Matrix for Total Population*

Variables		Factors								Communality h^2
		1	2	3	4	5	6	7	8	
Students:	Age Group						-.425	.480	-.426	.810
	Raw age						-.457	.479	-.426	.840
	Sex								.417	.265
	Ethnicity								.631	.444
	GPA							.795		.700
	Course grade							.825		.730
	CE				-.804					.703
	RO					-.824				.748
	AC				.827					.741
	AE					.830				.744
	AC-CE				.972					.961
	AE-RO					.981				.968
	Learning Style				.833					.789
Faculty:	Sex			-.838						[illegible]
	Age	.572		.818						.925
	Ethnicity						.792			[illegible]
	Years teaching	.894								.883
	Academic level		-.463				.584			.759
	CE	-.948								.962
	RO	.457	.805							.949
	AC	.863								.804
	AE		-.915							.888
	AC-CE	.981								.984
	AE-RO		-.929							.978
	Teaching style	.808	.589							.848
	Learner centered	-.919								.942
	Personalized instruction	-.828	.515							.953
	Relating to experience			.812						.952
	Assessing needs	.511					-.401			.840
	Climate building			.869						.886
	Participatory learning		.463	.748						.938
	Flexibility for development	-.903								.570
	Instructional orientation		.586				.827			.887

*only factor loadings greater than .400 are included

Factor four has bipolar student learning style loadings and accounted for 9.5 percent of the variance. The positive and negative ends of this factor are similar to the teaching style of faculty in factor one. This factor can be described as student abstractness versus concreteness.

Factor five also has bipolar student learning style loadings and accounted for 6.8 percent of the variance. The dimensions of this factor had positive loadings on AE-RO and negative loadings on RO. This factor represents student experimentation versus reflection.

Factor six is bipolar and accounted for 6.4 percent of the variance. The negative dimension of this factor is defined by the age of students and an instructional orientation that does not assess needs. The positive dimension is loaded on the faculty's instructional orientation, ethnicity, and academic level.

Factor seven has four positive loadings and accounted for 4.7 percent of the variance. These four loadings are on the student variables of age group, raw age, GPA, and course grade. Factor eight (3.1 percent of the variance) loaded negatively with student age and had positive loadings on student sex and ethnicity.

Conclusions and Recommendations

Factors one, two, and three are faculty related and accounted for 51.2 percent of the variance. All of these factors related to what a faculty member does in the classroom. The dimensions of abstractness and reflection in the context of an environment that is warm and personalized seems to have the most influence on the learning environment.

Factors four and five are related to the student's learning style and accounted for 16.3 percent of the variance. Student learning style seems to exert less influence on the learning environment than faculty instruction. The dimensions of how a student learns are characterized by the presence of student abstractness and experimentation.

The intercorrelation matrix also seems to indicate that teaching style is less important to older or more experienced students. Further investigation regarding whether the experience of older students fosters adaptability and flexibility is needed. Additional research is also needed to determine if factors that effect academic performance are different because of age, gender, or ethnicity.

References

Conti, G.J. (1985). Assessing teaching style in adult education: How and why. Lifelong learning: An Omnibus of Practice and Research, 8(8), 7-11, 28.

Dunn, R. and Dunn, K. (1979). Learning styles/teaching styles: Should they...can they... be matched? Educational Leadership, 36(4), 238-244.

Kolb, D.A. (1976). Learning Style Inventory Technical Manual. Boston: McBer and Company.Pierson, M.J., Springer, S.B., Frost, C.J., Dorsey, O.L., and Dietz, A. (1989a). The interactive effects of teaching and learning styles in an educational environment. National Issues in Higher Education, 22.

Pierson, M.J., Springer, S.B., Frost, C.J., and Dorsey, O.L. (1989b). Preferred teaching styles as identified by students: A descriptive study. Proceedings of the National Conference on Non-traditional/Interdisciplinary Programs, 204-213.

Turner, R. L. (1979). The value of variety in teaching styles. Educational Leadership, 36(4), 257-258.

INTERDISCIPLINARY STUDIES THROUGH DISCOURSE ANALYSIS

Hazel Jo Reed

Introduction

This report is based on work I have been doing at The Evergreen State College using discourse analysis as a teaching device and as a tool to assess learning. The initial impulse came from recognizing that communication is a collaborative activity in which the audience, as much as the producer, determines what is conveyed and the form in which it is conveyed. We all present ourselves differently to different audiences: we use different language, dress differently, and consider different topics when we are at leisure at home with our families than we do when participating in religious services or applying for a bank loan. One can view communities as audiences, having norms and conventions of discourse which help to identify and characterize them. And while those conventions serve to unite a community and expedite communication within it, they also act to exclude the outsider who is not conversant with them. The foreigner neither understands nor is understood...witness my trying to explain to the salesman at the local hi-fi store the difficulties I, who have no familiarity with electronics, was having with my tape recorder. Not only did "gizmo" or "whatchamacallit" not get very far is describing what was amiss, I found his vocabulary so non-informative I don't eve recall what it was.

What holds in general holds for academe in particular, where the relevant communities are defined by academic disciplines. One of the main causes of academic fragmentation is the specificity of discourses to each of them. Throwing out phrases like "minimax," or "negative space," or "Bessel functions" may be all well and good in their respective disciplines, but it certainly does not foster interdisciplinary communication. The situation is serious enough for practicing members of the several disciplines, leading to parochialism along with indifference ad even hostility to other, alien communities. Things are worse for the student. Typically what happens is that the novice is drawn by the nature of problems or techniques which interest him/her to a community concerned with similar issues. From there his/her academic training usually concentrates on acquiring the knowledge and skills of that discipline; the student is being initiated into the discipline's community. Part of that initiation involves becoming fluent in its discourse. Indeed, one measure of the thoroughness of the initiation (i.e., the mastery of the field) is the naturalness and ease with which the student employs that discourse. From becoming a knowledgeable audience, the student progresses to becoming a performer of a particular stripe. This focusing on the conventions of a particular discipline leaves little chance for an integrative overview of various disciplines, let alone for developing a sense of the purpose of academic activity in general.

Hazel Jo Reed, PhD., Member of the Faculty, The Evergreen State College, Olympia, WA 98505

One way to break out of this isolationism is to consider the conventions *per se* which various disciplines employ in carrying out their pursuits and in reporting on them. Comparison of jargons and methodologies in their own right automatically gives an overview. Furthermore, examining reporting conventions permits access to the separate disciplines and gives a way to compare them. Looking at discourse not just as a literary artifact, but as a social document gives insight into the nature of the communities of scholars involved. Here the interplay of the author/performer and the preferred audience is looked at in greater detail and leads to inferences about the very intellectual foundations of the discipline being considered.

Research by Charles Bazerman published in *Philosophy of the Social Sciences* does this. Taking a lead from literary criticism, he considers four issues which any piece of writing, including academic, addresses: the universe or field of problems which is considered; the actual form of the writing itself; the implied audience and its relationship to both the problems and the author; and the persona adopted by the author. Bazerman notes that each of the disciplines - science, social science, and the humanities - reports its research using manifestations of these four elements; it is the manner of handling them which provides the reader with a key to the knowledge base of the discipline. The accepted conventions also function as an indicator of how recognized and widely shared that knowledge base is. Professional articles, written for a specific community of scholars, give insight into that problems are considered significant and what methods of study are regarded as legitimate by that body. They also indicate the stance towards the research which is countenanced by the discipline. In short, they are intimations of the world views of the discipline.

In the fall of 1989 we used discourse analysis based on the Bazerman article as an instructional method for a full time team-taught program for entering freshmen at The Evergreen State College. Students in the program read and wrote autobiographical material extensively, and were introduced to historiography, developmental psychology, and cultural studies. As an extended (two week) exercise which was intended to involve them in library research methods as well as critical reading and writing, we had them read the Bazerman article and then locate a critical article on one of the authors used in the program. They were asked to analyze it in the manner of Bazerman and to write a short paper discussing their analysis.

It was symptomatic that initially they had a great deal of difficulty in understanding the point of the Bazerman article. The very notion that communication had form as well as content was novel, and the thought of analyzing it, still stranger. A preparatory lecture which introduced the idea of discourse had to be supplemented with a second as they worked through the project and confusions became apparent. Surprisingly, they had little difficulty in concentrating on the form of the critical articles rather than on their content once they understood the intent of the exercise. This was a great step forward in helping them gain distance from assigned readings, which had previously principally elicited responses of "I like/don't like it" with no intellectual reflection on either the material or their attitude toward it.

The form of analysis was a fortunate one, accessible to the weakest of our students and yet challenging to the best. At its most modest, it called for little more than counting numbers of paragraphs devoted to various aspects identified by Bazerman. At its most demanding, it allowed students to speculate on the intellectual stance and origins of the critic they chose. More than one went on the recognize that Bazerman's article itself could be subjected to the same scrutiny and proceeded to do so.

The beauty of this was that students were sufficiently initiated into membership of a disciplinary audience to be able to understand a piece of reported research and to be able to evaluate it by the standards of that audience. They found being able to talk about an article in its own disciplinary tongue enormously empowering. Furthermore, the recognition that the articles they read were consciously produced by individuals aware of an audience to be catered to as well as informed humanized the whole endeavor of academic research, reducing it to proportions which were less intimidating that the apparently ex Deus artifacts would intimate. Subsequent seminars permitted them to compare and discuss the various articles they had read, beginning a dialogue integrating numerous fields of study which we were then to capitalize on in later work. So, for example, A Farewell to Manzanar was discussed in literary, sociological, political, and psychological terms. This in turn allowed us to raise similar issues concerning subsequent readings. At the same time, students were able to question the underlying assumptions of the various disciplines, as implied by the nature of their reported research.

We were also interested in developing their writing skills and were able to build on their experiences with the Bazerman research. Particularly useful was the concept of authorial persona. Because they had been concentrating on autobiographical readings, both fictionalized and non-fictionalized, the distinction between author and narrator had been slight if extant at all. For most in this class, such a distinction had not been contemplated; they, childlike, took their readings at face value and never considered the possibility that the authors had actually exercised craftsmanship. To put not too fine a point on it, they read simply for the story line. By beginning with non-fictional, clearly stylized pieces and concentrating on the rhetoric involved, we were able to bring to the fore such ideas as distancing, diction, voice, and point of view. Once identified, these aspects could then be recognized as they occurred in arbitrary texts. Ultimately, the texts we were interested in were those of the students themselves. The discourse approach gave us a common vocabulary to use in discussing their writing, and it also heightened their sensitivity to various stylistic aspects of their own work, giving them greater control and flexibility. By guided imitation, they were able to enter into the praxis of academic writing and research particular to the various disciplines. Furthermore, as they became increasingly at home with a number of them, it became possible for them to intelligently draw on more than one, as appropriate to the moment and focus of their interest. They also came to understand that rhetorical devices were intrinsically crucial in making the meaning of a piece of writing, that they were not just window dressing. For many, the very notion that authors assume a tone which reflects their established distance from their material, a voice dictated by the audience they wish to impress, diction determined as much by that audience as the material itself...these were eye openers. It was a small step to point out that the initial judgement whether to write a research piece rather than a creative one was one each author, including themselves, makes and that writing in general can be examined in light of the concepts they were by now familiar with. Because the discourse approach was decidedly academic, students were able to critique each others' work as well as published pieces in a meaningful way without recourse to ad hominum comments, a particularly important issue in creative writing where the emotional distance of the author from the material is often very small.

One can also use discourse analysis applied to student work to assess what disciplines they are making use of, how they are integrating those disciplines and/or how those disciplines are interfering with one another and disrupting a student's learning. Naturally occurring classroom exchanges can be examined, or one can present students with a neutral text which they are to respond to, either verbally or in writing. In either case, they are permitted to identify what problems are significant to them, free from imposition of outside expectations...save those of their own making (this point I will return to). Since one of the main indicators of a discipline is that area of questioning which is regarded as legitimate, the simple selection of a problem can already point to a general area of disciplinary interest; and if integration has taken place, it must occur at loci where the student sees overlap in the disciplines' purviews. It has been suggested that original thinking occurs at those times when unusual juxtapositions occur coherently, which would imply that the most innovative students will find overlaps unanticipated by the assessor. The presentation of a neutral text allows scope for this possibility.

The types of evidence or knowledge that the student brings to bear on the selected problem is informative in several ways. It identifies a discipline fairly readily: the poet and the chemist are likely to regard quite different information as relevant to their investigations. Furthermore, one can consider how appropriate the selected information is. Does quantified data meet the needs of the investigation? Is reference to some particular authority or dogma relevant? Does anecdotal material have a bearing? Or has the student, in fact, drawn on sources which are intriguing to him/her but which have not been tied to the problem under consideration? If the latter, one could speculate that the student does not have a very clear idea of whatever discipline it is that appeal has been made to. In on seminar on Invisible Man, for example, two students recalled having heard that number symbolism played an important part in the book and then went off on a disconnected (and somewhat incorrect) aria on number mysticism, which they were unable to tie back to the text at hand. Their discussion made it clear that, though they were drawn to the occult, they knew little about number mysticism; nor had they come to an understanding of the role of symbolism in literary criticism. Little wonder that they were unable to synthesize the two.

In addition to the information used, the methodologies which a student employs also give indications of the contributing disciplines. So, too, do the forms of argument, as Bazerman has reasoned. It is not uncommon in student work to find inconsistency of methodology and/or argument with the information being used. We found, for example, one paper which began with an interest in the psychological makeup of a character, introduced socio-economic factors concerning the character's background, and ended up with rough statistical analysis of the character's use of slang. Such a diverse set of approaches, if tied together, can reflect an active and imaginative mind at work, integrating studies from many areas. It can also degenerate into murk and indicate a failure to integrate, with the various disciplines contaminating one another rather than cross-fertilizing. Though mastery of the individual disciplines can, in such instances, be obscured, the interference itself can be a measure of the degree to which the student is engaged in melding different approaches.

I should like to return to the issue of the audience which a student may artificially construct to perform to in the assessment process. In an attempt to ascertain the level of math skills of teacher ed. students at Evergreen, I asked the teaching faculty to administer to them a formally presented standardized instrument which measured basic math competencies. Later I asked the same students to translate some simple mathematical statements into ordinary English. Applying discourse analysis to the problem solutions was useful but what was of greater interest, given the apparent panic experienced by these students at having to take such a test, was the posture that they assumed in the translation. Almost universally they avoided colloquialisms and assumed the "correct" articulation which is taught in grade school. Not only that, the voice that they used was painfully reminiscent of a Dickensian school mistress setting down the law to a group of hapless six-year olds. Their translations were a parody, in short, of what they thought I as the expert interested in mathematics and mathematics education wanted. I credit this perception to the format and the situation surrounding the skills exam, which echoed the traditional schoolroom test setting with all its aura of an unforgiving and all-knowing teacher taking pleasure in exposing one's ignorance. Be that as it may, the fact is that these students wrote to a particular, non-existing audience. It was possible to make inferences about their vision of the role of the teacher as well as that of the mathematician as a consequence.

Mathematics lends itself easily to discourse analysis, since its content and its discourse are well defined and identifiable. As a continuation of assessing mathematics competencies of Evergreen students, I am now engaged in a project which compares standardized test results, background information, and participation in a seminar on an article which contains quantitative and graphical information as well as information in narrative form. In this instance one of the primary issues is whether or not there are relationships between the three aspects: background, standardized test results, and spontaneously occurring use of mathematical information. It is hoped that the openness of a seminar situation, which is one which is familiar to all Evergreen students, will avoid the impulse to speak to an authoritative, judgmental audience rather than to peers. Furthermore, the extended nature of seminar discussions allows for fuller play of interactive comments and, because the discussion itself is unrehearsed, gives clearer insight into naturally occurring thought patterns of the participants.

Accessing those intrinsic, naturally occurring modes of thought is the great strength of discourse analysis as an assessment tool. There are no "wrong" answers. Instead, those being studied are looked at in their own terms: they define the issues which are of significance to them, draw on their own background knowledge bases, select the method or methods to examine their problems and its relationship to what they know, and formulate their analysis in the mode which seems to them most appropriate. Each of these acts lets us on the outside understand both the reasoning of the student and the sources of his/her assumptions and intellectual stance. We are also able to identify characteristics of the community which the student is performing for. With these kinds of information in hand we can then work towards a more integrated approach to learning, one which is consistent with a student's natural aptitudes and preferences.

Traditionally the various disciplines have determined their own discourses and imposed them on the student, leading to disconnectedness and insularity. Discourse analysis provides a way to reverse that divisiveness, allowing for interdisciplinary learning worthy of the name. My experiences with using it as a multifaceted teaching method have all been positive, with students at various levels. Since few if any have reflected in a distanced way on the nature of their academic pursuits, it has proven revelatory, raising their self-awareness and calling into question previously unexamined assumptions about their endeavors. Furthermore, analyzing their discourses has helped me better understand the style as well as the content of their learning.

Reference

Bazerman, Charles. "What Written Knowledge Does: Three Examples of Academic Discourse," Philosophy of the Social Sciences 11 (1981) 361-88.

FACULTY AND STUDENT DEVELOPMENT ON THE MIXED AGE CAMPUS

Vicki Williams Sheppard
Martha Hinkle Fleer

Introduction

As the mixed-age campus becomes the norm in higher education, institutions must recognize the importance of change designed to meet challenges involved in cross-generational learning.

The Mixed Age Campus

Dramatic change has occurred within the academic community during the past twenty years. Our highly complex and technical society demands that educational pursuit become a life-long endeavor for those who are to remain intellectually competent. Education must extend beyond preparatory years of learning and terminal degree if we are to compete in a world economy bombarded with an information explosion.

Recent studies indicate that more than half the women in America now work and must of necessity continue their education if they are to remain professional viable and technically proficient. The United States Department of Education reports indicate that sixty percent of all 1987 college students were twenty-three or older; clearly, the traditional age (18-22 years of age) is no longer the norm on college campuses.

The demographic impact of declining numbers within the traditional-age student population, coupled with a dramatic increase of nontraditional age learners has created new issues in higher education for students and faculty. Administrators now are provided the challenge of producing a learning atmosphere which meets the needs of two developmentally and culturally divergent groups.

Vicki W. Sheppard, Assistant Director Continuing Studies, Salem College, Winston-Salem, NC
Martha H. Fleer, Dean of Continuing Studies and the Evening College, Salem College, Winston-Salem, NC

Salem, a small private college where the number of adult and traditional age students has become equal within a relatively short period of time, has adult students and traditional learners enrolled in the same curriculum, studying in the same classes. Differences and some tensions began to appear as early as 1978 when the program was young and the ratio of adult to traditional students was low.

A Wake Forest University graduate student, Nancy Pentecost, provided helpful data in a research project on "A Comparison of the Needs of Continuing Education Students and Resident Students." Utilizing the Personality Research Form, Pentecost notes various differences in the two populations. The mean scores of Continuing Education students and resident students differed significantly on six of the fifteen scales of the Personality Research Form. The Continuing Education subjects scored higher on the scales of achievement and understanding. High scores on these scales tend to indicate a need to undertake and carry out difficult tasks and to understand and synthesize many knowledge areas. Adult students also scored significantly higher on the autonomy scale, indicating a need for independence and individual freedom.

The Pentecost study found that resident student subjects scored significantly higher than continuing education student subjects on need for affiliation and nurturance. The traditional age students also indicated a higher need for play. Individuals scoring high on this Personality Research Form scale enjoy and participate in social and pleasure seeking activities and tend to maintain an easy-going attitude towards life.

These results correlate with developmental findings of Havighurst, Erickson, Neugarten and Chickering. Traditional age students are focused on identity formation with heavy reliance on peers and the joys of those relationships while breaking away from parents and establishing autonomy. In contrast, adult students, having completed those tasks, view life more in Neugarten terms of time left for living and the sense of urgency that brings.

Developmental differences manifest within the classroom in a variety of ways: adults, many of whom have fulfilled life-long ambitions by enrolling in classes, tend toward overzealousness and compulsivity in their studies, usually achieving the highest scores. Frequently, traditional age students resent the time and dedication adults are willing to invest in order to achieve their success. In addition, years of life-experiences and practical knowledge make the adult student anxious to contribute to class discussions—often with the result of dominating the class and discouraging traditional age student participation. Unfortunately, traditional students feel intimidated and resentful, particularly when the professor, thankful for an interested, prepared student, responds favorably to the adult, and sometimes grants more attention to him/her.

Because the adult student frequently maintains full-time employment, family, and school responsibilities, he/she may request extensions on assignments or other special consideration. Professors tend to honor these requests more frequently than similar requests from traditional students, whose problems appear less crucial; this produces further cause for resentment within the younger population.

Faculty and administrators became concerned with increased tensions between groups on the Salem campus and applied for funding from the Consortium for the Advancement of Private Higher Education and the Z. Smith Reynolds Foundation in order to carefully examine the problem and develop strategies to ease tensions for both faculty and students. Funding was granted and a one and one-half year study is now underway, focusing specifically upon the mixed-age campus.

Five faculty members, who were each released from one course for the fall term, agreed to meet on a weekly basis and review issues most critical to the problem. In addition, a coalition of twelve adult students and twelve traditional age students began to meet and develop a dialogue and to openly confront grievances.

The initial project was an opinion survey of both groups of students. Sophomore and senior traditional age students and all Adult Degree Program and Evening Degree Program students were surveyed to determine their levels of concern. An unusually high response rate of more than 60% signaled the importance of these issues to our campus. The following summary provides an overview of their opinions (see Table 1, Summary of Student Opinion).

Clearly, the traditional age students feel more strongly negative about mixed age campus issues than do the adult students. Results demonstrate that a high level of satisfaction and reward realized by the adult learners has overshadowed any feelings of resentment directed toward them by traditional age students. Approximately 38% of the traditional population agreed with positive statements, while 41% agreed with negative statements. However, only 17% of the nontraditional population agreed with negative statements. It is clear that the nontraditional student feels very positively toward the mixed age campus, while the traditional population could best be described as "ambivalent" toward it.

Table 1

Summary of Student Opinion Survey Concerning Mixed-Age Classes

Positive Statements (abbreviated versions)	% Disagree or Strongly Disagree			
	Soph	Senior	ADP	BSBA
1. Mixed-age classes are more interesting	21	27	4	9
2. Both groups treated equally well by faculty	49	68	10	15
3. More attentive when other students talk	44	37	19	26
4. Learn more in mixed-age classes	48	45	18	38
5. Prefer mixed-age classes	45	44	4	16
6. Mixed-age study group would comfortable	23	22	11	20
7. Education benefits from mixed-ages	19	32	2	11
8. Professors respond well to concerns of both traditional and nontraditional	25	27	5	9

Negative Statements (abbreviated versions)	% Disagree or Strongly Disagree			
	Soph	Senior	ADP	BSBA
1. Difficult to interact with different ages	28	25	5	14
2. Less involved in mixed-age	19	30	7	16
3. Tension exists between mixed-age groups	62	79	18	12
4. Mixed-ages inhibits class discussion	28	47	10	18
5. Mixed ages hindrance to my academic success	13	12	0	0
6. Both needs of both groups cannot be met in the same class	27	29	8	7
7. Both groups stick to themselves in class	78	75	57	67

Faculty were surveyed to determine their perceptions on the mixed-age classroom. Results demonstrate that most professors enjoy teaching the adult learner and prefer the diversity offered by the mixed age class; however, they do not perceive the level of negative feelings experienced by the nontraditional student. They believe that their style of teaching is the same for both groups and agree that diversity in the classroom presents few academic problems. Responses describe the mixed age class as an intellectually improved climate with more sophisticated and mature discussion opportunities.

Most faculty indicated that they were aware that nontraditional age students perceived a disparity in treatment of both groups by professors. They believe students learn more in a mixed age class and that little tension exists between groups. Respondents unanimously agreed that students preferred mixed classes (see Table 2, Summary of Faculty Opinion).

Outcomes

A major change in student attitude had its beginning in a preschool conference of twelve adult and twelve traditional age students which was held at the Center for Creative Leadership in Greensboro, North Carolina. This group of student leaders participated in a series of team-building, negotiating and problem-solving exercises which resulted in a dramatic breaking down of stereotypes, as well as a plan for future activities during the school year. The group has continued to meet, and formal and informal changes have occurred. Adult students now have been invited to attend student government meetings and were included on the invitation list to the annual spring formal in early March. A small group of adult students and their husbands danced and partied with traditional students and mates into the early hours. Senior adult students invited traditional senior counterparts for a party prior to Salem's annual Sophomore-Senior banquet and presented them with gifts commemorating the campus.

A fall faculty conference, devoted solely to the issue of the mixed-age campus, provided a forum for the exchange of ideas and sharing of classroom experiences. A panel of three consultants was invited to offer objective advice after examining statistical survey results and observing a presentation by the coalition of mixed-age students. The students overwhelmed the faculty with their exuberance and obvious respect for eachother. Weeks of sharing experiences and searching for solutions resulted in new knowledge of common concerns.

Table 2

Summary of Faculty Opinion Survey Concerning Mixed-Age Classes

---

Number of Respondents: 37; Response Rate: 60%

SA - Strongly agree; S - Agree; U - Uncertain
D - Disagree; SD - Strongly disagree

Preferences	SA	A	U	D	SD
23. Prefer classes with noticeable mix of ages	24	47	15	15	0
13. Prefer separate classes for each group	3	3	3	29	62
14. Enjoy teaching traditional more than nontraditional	0	3	9	50	38
18. Enjoy teaching nontraditional more than traditional	9	12	18	44	18

Teaching Mixed-age Classes	SA	A	U	D	SD
15. Believe it's important to modify teaching style	6	6	3	53	32
3. I change my teaching style	6	9	6	44	35
9. Believe it's important to modify assignments or tests	3	3	3	53	38
1. I change the assignments and tests	3	6	0	38	53
11. Important to be more flexible with nontraditional	0	32	9	29	29
10. Control discussion more firmly with mixed-age class	0	3	9	53	35
2. Nontraditional students consume more time and energy of the instructor	0	24	0	56	21
6. Student diversity presents few academic problems	18	47	12	21	3
4. Age composition of class has little influence on learning	3	33	18	24	21

Table 2 (continued)

Summary of Faculty Opinion Survey
Concerning Mixed-Age Classes

SA - Strongly agree; S - Agree; U - Uncertain
D - Disagree; SD - Strongly disagree

	SA	A	U	D	SD
Class Climate					
21. More sophisticated and mature discussions with mixed ages	24	39	15	21	0
16. Improved intellectual climate with mixed ages	44	41	9	3	3
27. Traditionally and nontraditional enjoy working together	15	59	15	12	0
20. Traditional frequently intimated by nontraditional in class	6	26	18	38	12
17. Believe traditional often resent having nontraditional in class	15	33	33	12	6
2. Interpersonal dynamics creates problems between age groups	3	6	6	55	30

Faculty development continues with a scheduled workshop on cooperative learning; handbooks are being prepared to orient new faculty to the mixed-age campus and to remind current faculty of "do's and don't's." As a means of improving communication between groups, traditional student organizations have been added to the mailing list for adult student publications. In addition, there has been an exchange of articles in both student publications.

It is usually painful to effect change; however, our world in the late twentieth century requires that we recognize a new student composition on today's college campus. We cannot continue to hold fast to old means of dealing with issues when they are no longer relevant. Creativity and flexibility must be employed as we go about the business of managing a cross-generational campus.

Reference

Pentecost, N. M. (1978). Comparison of the Needs of Continuing Education Students at a Women's College. A research paper presented to the graduate faculty of Wake Forest University, Winston-Salem, NC.

OVERCOMING OBSTACLES TO NON-TRADTIONAL EDUCATION IN A TRADITIONAL INSTITUTION: A SUCCESS STORY

Patricia J. Shine

Introduction

This paper will present national and regional statistics on the number of adult students returning to school as well as profiling the adult students' abilities, want and needs when selecting a school and a program.

This population poses a challenge to traditional institutions to examine the current relationship between policies and practice to better fit and enhance the educational experience of the adult learner. Many traditional institutions offer programs for earning "non-traditional" credits but, when pursued by the adult learner, the resistant undercurrent is detrimental to the student and the institution. Policies regarding transfer of the non-traditional credits need further definition and articulation among institutions in order to insure the student and the institution that these programs are credible and viable alternatives.

All methods of prior learning assessment and earning non-traditional credits will be examined and discussed with emphasis on assessing experiential learning through portfolio development. This is the method which meets the most resistance from traditional faculty and traditional institutions with regard to transfer of credit. Criteria for evaluation and possible evaluation techniques which may satisfy the "traditionalist" faculty evaluator will be discussed. The need to assist the adult student to identify the difference between traditional learning and experiential learning for the purpose of portfolio development will be examined.

An example of an adult student who has successfully utilized all non-traditional methods to accelerate a liberal arts degree program will be presented.

Adult Students Return to School

Recent statistics strongly suggest that colleges and universities would be wise to design, promote and market programs designated for adult students. "According to the College Board, more than six million students--45 percent of those enrolled in American College programs--are 25 or older.

Patricia J. Shine, Bucks County Community College,
Swamp Road, Newtown, PA 18940

The number of such students jumped 79 percent between 1969 and 1984. Within a decade, this new group of learners, 60 percent of whom are women and 70 percent of whom work full time, will make up a majority in college classrooms." [1] Other sources suggest that this population will be responsible for 60 percent of all undergraduates by 2000.[2]

There are many variables which contribute to this growing phenomenon. The adults who begin or return to school are often experiencing a transition in their lives. After working for a company for many years, an employee will see a new management team replace his coworkers with younger, degreed individuals. This adult, who has relied on loyalty to his employer for job security, is suddenly faced with his long years of experience and lack of credentials. The growing number of single mothers who must enter or return to the work force is another significant portion of these adult students. "Entering, advancing, or changing careers (draw) adults back to school...They need that further education to get something--that next job, that next promotion--just entering the market or changing a career."[3]

Another contributing factor is the projected labor shortage in workers with postsecondary education. The U.S. Department of Labor has issued a report on the employment outlook for the years 1988 to 2000. According to the report, the department "expected the number of jobs requiring education beyond high school to rise 22 percent, compared with an overall job growth rate of 15 percent. The department blamed the nation's educational shortfall on possible shortages of technicians and skilled craft workers--occupations that generally require post-secondary education below the bachelor's degree level."[4] The report goes on to restate that although jobs will be available to those without degrees, college graduates will continue to earn higher salaries and high school drop outs would remain at a disadvantage in the labor market, thus even further widening the gap in living standards.

Regional Programs Available

Some colleges and universities are responding to these statistics. To create possibilities for the single mother, Chatham College, a liberal arts school in Pittsburgh, offers a dorm for adult students with children. A mother and child can reside in Berry Hall for $350 a month, including utilities, with day care facilities nearby.

Colleges located in regions where retired adults relocate are also creating programs to offer "lifelong learning" to the growing number of retirees. In St. Petersburg, Florida, Eckerd College offers a senior citizen condominium on campus.

In the farm belt region, St. Mary-of-the-Woods College near Terre Haute, Indiana, allows over half of their students to earn their degrees through independent study. Attending traditional classes would mean a daily 100 mile commute which is impossible for students who must work while attending school. The students confer with their professors by telephone and utilize the mail to transport assignments. Relying on the high motivation and goal directedness of the adult student creates endless possibilities for college programs.

To respond to the labor shortage in skilled and technical occupations, many adults are encouraged by the growth of these programs at the community college level. The community college offers career programs which result in an associates's degree and marketable job skills, but often the adult student gets "hooked" on education and transfers to a four year institution to complete a bachelor's degree.

If these colleges and universities also offer programs to assess the prior learning experience of this growing population, interested students with a variety of life experience will inquire about and pursue these programs. Adult students have no time to waste. They will seek out a program which meets their needs, and the alert and well prepared institutions will have these programs in place.

Adult Student Profile

The adult who begins or returns to school is often in the throes of a life transition. Whether single motherhood, a management change, a lost promotion, or a health disability requiring a career change has forced the issue, this non-traditional student approaches college with an entirely different set of needs than those of the traditional student. "They are also demanding consumers. As the number of older students has risen, so have calls for on-site day care, flexible course schedules to accommodate full time jobs, longer hours for campus bookstores and libraries, and more aggressive job counseling and placement."[5] When asked at a recent workshop offering non-traditional credit information, a student who works full-time shift work, stated that she would like to be able to attend a three hour class once a week in the day or evening, depending on her shift. All of the adults in the group agreed that greater flexibility in course scheduling is very important. Most would attend a weekend college holding classes on Saturday and Sunday if it meant not having to juggle jobs, home, children, and school during the week.

These students bring a wealth of life experience to class with them. Many have technical knowledge and skills acquired "on the job" that traditional students are learning in the classroom. Many have learned managerial, supervisory and administrative theories and principles despite never having been taught them in the traditional sense. Their classroom has been non-traditional, and they will look for a program that allows them to apply this non-traditional education toward securing academic credit.

Policies vs. Practice

Many institutions have developed policies regarding the assessment of prior learning. Most have established procedures which accept the "traditional" practice of testing the student to determine prior learning. The use of the College Level Examination Program (CLEP) and the American Council of Education (ACE) Guide to credit recommendations for military and other non-collegiate educational experiences is fairly widespread. During the 1988-89 fiscal year, the Educational Testing Service offered 78,423 CLEP exams through their national testing service and 39,338 CLEP exams through regional institutional services.[6] The College Board offers statistical analysis and standardized guidelines for determining passing scores for CLEP exams, but each institution is free to determine its own passing grade and course equivalency. Thus, a student taking a CLEP test at school X may receive credit for a test that when transferred to school Y is not accepted for credit. This inconsistent policy can cause undue hardship on the student utilizing this "accepted" testing program to accelerate a degree program.

In 1988, the Council of Adult and Experiential Learning (CAEL) conducted a national survey concentrating on the use of portfolio assessment and departmental challenge exams for the awarding of prior learning credit.[7] Surveys were sent to 1400 colleges having been identified as offering prior learning assessment programs. Only 18 percent (256) surveys were returned and the results were quite alarming to proponents of prior learning asssessment. There is a large discrepancy between the number of colleges offering portfolio assessment and departmental examination and the actual awarding of credit through the use of these programs. Considering that the 256 institutions responding grant several million credits each year, the prior learning assessment credits tabulated in the survey represent less than 5 percent of possible credit award. Also, the survey concluded that many institutions offering portfolio assessment and departmental challenge exams would never accept similar credits awarded by another institution in transfer.

Several conclusions can be drawn from the results of this survey. While colleges and universities have established prior learning assessment programs "on the books," few use portfolio assessment and departmental exams to credit prior learning. In practice, these institutions make the process so difficult that it is often easier for the student to take the traditional classroom course. The "unstated" policies of these institutions seek to limit, rather than promote the use of the programs. Most traditional institutions will immediately place a limit on the number of credits that can be earned "non-traditionally." Others state that a student must be enrolled in a traditional course before non-traditional credits can be transcripted. Often, the faculty of these institutions resist learning about such programs, so that the number of willing evaluators is quite limited. Even willing faculty evaluators will discourage students by stressing what they will miss rather than utilizing the eagerness of these learners to explore and further define what they know.

It is also very discouraging that a majority of the institutions offering these programs will not accept similar credits in transfer. This fosters an elitist atmosphere strongly suggesting that only those non-traditional credits earned "in house," evaluated by "competent" faculty are legitimate. It creates a highly competitive, confusing atmosphere for the student who believes, as most educators do, that learning is the ultimate goal. When the educators and the institutions of higher learning cannot articulate an agreement about such programs, it casts great doubt and mistrust on the sincerity of the educational system. It detracts from the educational experience that colleges and universities are trying to promote as invaluable.

Adult students are beginning or returning to school because they believe this promotion. They are often insecure, intimidated, and discouraged by the time investment necessary to earn a degree on a part time basis. Recognizing knowledge gained through life experience and providing a plan for utilizing it to attain educational goals, gives the student greater confidence and makes the degree more attainable. Prior learning assessment programs enable these students to meet personal, career and educational goals by translating experienced-based knowledge into academic credit while enjoying traditional educational experiences in academic areas where classroom learning is necessary. It is the best of both worlds, and it is the obligation of colleges and universities to resolve the issues which prevent the existence of this unique educational climate.

Methods of Prior Learning Assessment

A complete prior learning assessment program has three distinct components: transfer of credit, testing, and portfolio assessment. Credits can be earned through evaluation of transfer credit from colleges or technical schools granting college credit. Also, the American Council of Education produces a guide listing credit recommendations for military training and other non-collegiate training programs which have been evaluated by a team from the American Council of Education. These credits are specifically delineated on the transcript as transfer credits. Credit is granted but grades are not transferred. When the student transfers these evaluated credits to another institution, all original documents must be re-evaluated at the new institution. Credits can be gained or lost during this process.

There are nationally standardized tests available which, if passed, will result in the awarding of credit. The College Level Examination Program (CLEP) and the Defense Activity for Non-Traditional Education Support (DANTES) and Advanced Placement Examinations are available through the Educational Testing Service. The CLEP is the most widely used and most easily transferred, although standards for passing grades and course equivalencies need further refinement. The Credit by Examination Program is a departmental exam that is based on a course particular to the institution. Credits earned through this program will apply toward graduation from the institution offering the test, but may not transfer. Again, credits earned through these testing programs are specifically delineated and original scores are required at the time of transfer. Credits can be gained or lost at this time.

The portfolio assessment process is the most subjective and controversial method of prior learning assessment. Although general criteria for the evaluation of a portfolio has been developed and promoted by CAEL, most institutions offering the program have adapted the proposed format to meet the needs and standards of their academic departments. A portfolio usually consists of several writing samples which must reflect college-level writing skills. The writing samples are in the form of a narrative personal essay which details the life experience that is directly involved with the specific course that is being challenged. The student must include goal statements which often require much reflection and usually a detailed resume is a basic requirement also.

The course syllabus, objectives, and learning outcomes are used as the criteria for evaluating the portfolio. The students are asked to make competency statements for each of the course objectives. It is at this point that the students must examine how experiential learning differs from traditional learning. The competency statement must reflect the application of the theoretical objective. Urban Whitaker states, "Credit should be awarded only for learning that has a balance, appropriate to the subject, between theory and practical application."[8] Every competency statement must be fully documented and publicly verifiable. The documentation can be in the form of work samples, a job description, certificates received from non-credit sources, letters of corroboration from employer or associates familiar with the students' abilities, a bibliography, a demonstration, or any other source necessary to convince the faculty evaluator that the learning has occurred.

The compilation of a portfolio is a complex process that is often misunderstood by the "traditionalist" faculty evaluator who believes the student is seeking "easy" credit. This is clearly not the case. The portfolio is, in essence, the starting point of the evaluation process. It is submitted as evidence of life learning experience which may be equivalent to academic credit. The actual evaluation of the portfolio can take a number of forms, such as:

a) examination of portfolio contents
b) direct observation of student performance
c) written examinations or assignments
d) structured oral interviews

The evaluator must consider that traditional learners may score high on tests about theory, but they are often weak when it comes to theory application. Experiential learners easily apply the theory, but may not be able to conceptualize it. It is during the evaluation process that the evaluator can ask this very highly motivated student to research and state theoretically what has been learned through life experience. Credit should not be awarded until the evaluator is fully satisfied that the appropriate learning has taken place.

Credits awarded for successful portfolio assessment are also specifically delineated on the transcript. Credit is awarded, but no grade is given.

A Successful Student

In January 1989, a man recently retired from IBM attended a Life Learning Experience information workshop to discover the options available to him in pursuit of a bachelor's degree in liberal arts. He decided to enroll in the community college which offered a prior learning assessment program.

He registered for an Aerobics class, completed his placement testing and planned his course of study. He submitted a transcript from a technical school he had attended and received 14 credits in transfer. He successfully completed a CLEP exam for English Composition I and transferred Spanish I credits earned at a nearby college. At the end of his first semester he had accumulated 22 credits.

He completed 3 traditional courses during the summer and submitted an ACE evaluation Dale Carnagie course as transfer credit. During the Fall semester, he registered for 12 traditional credits and prepared 3 portfolios for assessment. At the end of one year, he had earned 55 credits.

He is currently completing 12 traditional credits and has submitted 3 additional portfolios. He will graduate from the community college in May 1990 with a total of 76 credits. He will transfer to a non-traditional four year institution which will accept all of his credits. He anticipates having his bachelor's degree by May 1991.

ALTERNATIVE DELIVERY SYSTEMS

AN ITFS MODEL: TAKING THE DISTANCE OUT OF DISTANCE EDUCATION

J. Robert Burull

Introduction

When I developed the abstract for this presentation, I titled it--AN ITFS MODEL: TAKING THE DISTANCE OUT OF A NON-TRADITIONAL DISTANT LEARNING TECHNOLOGY. The Abstract read as follows:

ITFS, also known as "Instructional Television Fixed Service," has been a part of education's "hi-tech" lexicon for over thirty years. Until the past five years, however, it has mostly lain dormant lacking a convincing feasibility study, creative financing, or an adaptable, practical user visualization.

I propose in this Paper to illustrate a successful operating ITFS model including: (1) the marketing process which provided the entire 4-channel ITFS facility by a private corporation through a joint partnership with the College; (2) an integrated College-K-12 ITFS Media Consortium which enhances "Articulation" between the College and the area high schools; (3) an interdisciplinary programming package which includes college video courses, in-service training for high school upperclasspersons and faculty/ administrators, K-12 enrichment courses, and opportunities for combined high schools to have interactive student activities LIVE; and (4), an integrated (school-business community), interdisciplinary (State-District) governing board which oversees content policy, fiscal decisions, and motivates outreach program (private and public) diversity.

The Paper's overall objective is to illustrate a local ITFS's success in taking "distance learning" through a successful model of financial development, marketing, and instructional effectiveness which implants local traditional classroom values and methodology into a non-traditional, alternative learning technology environment. (END OF ABSTRACT).After completing the research and constructing the final outline, I discovered that laying the foundation for "taking the distance out of distant learning" had been expanded into a major part of this paper's discussion; that is analyzing the problem of maintaining interpersonal relationship(s), the key element in learning, between teacher and student, lecturer and group in a distant learning environment.

J. Robert Burull, Ph. D., Telecommunications Coordinator, Madison Area Technical College, 3550 Anderson, Madison, WI 53704

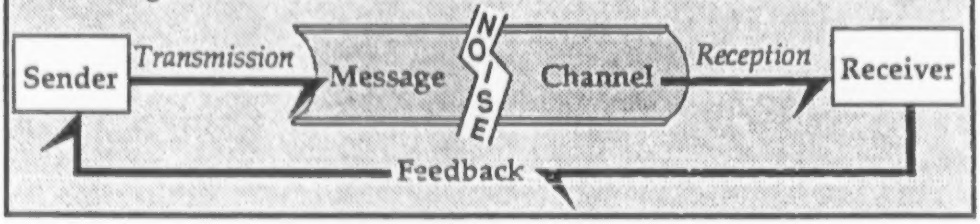
How does one preserve the basic, true and tried learning theorems and the personal communication principles which have been so thoroughly proven and, indeed, exhaustively studied over the past decades as necessary elements for sharing, for caring, for understanding--for learning, when the teacher and the student are miles or continents apart? To find an answer to this question, we need to first look at Communications and Learning:

Communication

Traditional Communication Cycle Model

The word communicate comes from the Latin root "communis"--meaning communion or the idea of a shared understanding of, or participation in, an idea or an event. Paul Tournier said that when we provide each other with just information, we communicate. But when we communicate with a shared understanding, we "commune," or have a communion. Academicians and researchers generally define communication in accordance with the "sender/receiver model" such as this mathematical model developed by Shannon and Weaver in their work on information theory.

Figure 1-1 Shannon / Weaver Model of Communication



This model characterizes communication as a systematic process, of which the main components are sender, message, transmission, noise, channel, reception, and receiver. For purposes of this paper, the sender is the teacher, the receiver is the student, and the transmission and channel are an ITFS facility.

Weaver and Ness, in an INTRODUCTION TO PUBLIC SPEAKING, identify these same model components, but further explain the sender and receiver's psychological and emotional role characteristics. They characterize the psychological and emotional responses as a necessary part of the communication process. The receiver decodes the message from the sender and reacts. This reaction by the receiver is a signal in turn to the sender that he understands the message. His reaction is received by the sender, who in turn decodes the receiver's message and reacts. As each understands the other's response, a constant role reversal of sender and receiver takes place as they engage in this two way communication.

Weaver and Ness examine the hypothetical situation of a public speaker seeing and speaking in real time to an audience, or to another person. They note that speech is one process by which a person attempts to influence (or teach) another person or persons. They identify "a smile," "a shrug of the shoulder," "a querulous inflection," or a spoken phrase of a sentence as any part singularly or in combination that may be speech...and I might add whether literate or illiterate.

Model Problem with Non-Traditional Communication

The problem is that the Shannon-Weaver Model and Weaver (no relationship to the first) -Ness's description of sender-receiver psychology, "shrug of the shoulder," "Listening and Learning" does not fit what is happening in our modern-day, educational communications technology process--more specifically in distant learning. Their model, according to The Office of Technology Assessment (OTA)--Congress of the United States, assumes that communication takes place as a consistent, linear sequence of events--an assumption not supportable in today's technology-mediated information environment. Further, according to OTA, it does not apply to interpersonal communications. How does one identify and distinguish with a computerized bulletin board, for example; who is the sender and who is the receiver? Similarly, who is considered the sender when the receiver can now access information on demand? The model, according to Wilbur Schramm in "The Process and Effects of Mass Communication," "ignores the reciprocal aspects of communication and the fact that listeners and viewers are very much active participants."

Modern Day Communication Criteria

What are today's communications infrastructure characteristics and criteria which govern our current communications education technology, the available access opportunities, and their allocation throughout society?

According to OTA's CRITICAL CONNECTIONS, COMMUNICATIONS FOR THE FUTURE, published in January, 1990, they are as follows: (1) capacity (the speed and volume of data transmission); (2) flexibility (how easily the system can be modified); (3) versatility (the extent to which the system supports a wide range of applications or services); (4) interoperability (the degree to which facilities can transfer information or share resources automatically); (5) timeliness (overall speed of message change); (6) fidelity (the extent to which the technical quality of a message is compromised by transmission or playback); (7) security (the ability to protect messages); (8) survivability (the degree of resistance to natural or man-made crisis, as well as the extent and speed at which a system can be restored); (9) reach (the extent of a system's or facility's service area); (10) openness (the ease with which the system and the service components that comprise it can be accessed); (11) penetration (the density of the facilities within a served area); and finally, (12) use (the usage levels by those within a service area). To these characteristics I might also add feasibility (costs to production or return on investment--in both human and dollar amounts). All of these characteristics are subject to changes in technology, application, environment, and administrative infrastructures.

So far we have briefly looked at two components of "Non-Traditional Distant Learning"--the traditional communication cycle, and some of today's modern communication technological infrastructure characteristics. Now we come to that component which has in one way or another provided all of us with a "reason for being" as well as an income--trying to figure out how best to help people learn. In these days, it seems that we must also help people learn in whatever way we can in an apparent counter culture, counter education society that simultaneously supports our attempts; while at the same time indulges in ever increasing megatonnage amounts of a culturally destructive "unlearn" virus which could change our society as we know and knew it.

Learning

What kind of environment do we need in which to best learn? What are the priorities and levels of our potential learners? Do you remember Maslow's hierarchy of needs for the learner, or Bloom's taxonomy of learning objectives?

Learning Needs

Maslow prioritized the learner's basic needs for us to consider when we are attempting to instruct or to educate. Maslow said a learner's first priority is his basic needs to survive in a higher order, i.e., food, (nutrition), getting along within his environment, sleep, a place to go potty, clothes to wear, satisfying basic creature necessities. The second priority is safety. Then we need love and belonging. From there our need goes to self esteem. From there we graduate to self actualization needs--to become, to develop, to be someone worthwhile if only in our own minds. Maslow's final learning need priority is to "know and to understand." You might note that these needs ascend on a scale from primitive to sophisticated...from basic to highly advanced.

Learning Levels

When we consider learning and communicating in a "distant learning" environment, we must also consider and acknowledge Bloom's taxonomy of educational objectives" including the "cognitive" domain; the "affective" domain; and the "psychomotor" domain. Like Maslow's ascending hierarchical needs for learning, Bloom's Cognitive Domain levels of learning are also on an ascending chronology starting at the base level of knowledge (involves the recall of facts and specifics), and graduating through comprehension, application, analysis, synthesis, and evaluation (involves the act of decision making, judging, or selecting).

The question is--in the absence of traditional, normal interpersonal relations, and face-to-face, two way, "give-and-take" communications between teacher and student--can "distant learning" be successful in terms of achieving the end of Maslow's hierarchical need (self actualization), or Bloom's "synthesis" and "evaluation" educational objectives? To date, no reliable research has been undertaken to answer the above critical questions.Other learning needs and levels can be cited, but let's assume that Maslow and Bloom's hierarchical learning needs and educational objectives are still basic criteria for an education. I submit, if we are going to take learning seriously beyond the traditional classroom into the non-traditional "distant learning" new methodology by using available and anticipated communication technology, we cannot afford to deny, neglect, overlook, or make believe that Maslow, Katz and Kahn, Skinner, Bloom, and Socrates, among others didn't have something important to say about learning and critical thinking, which has often been repetitively proven.

Distant Learning Challenge and Responsibility

At our higher levels of learning (College-University-Adult Education), we develop skills, self esteem, cultural, and intellectual standards. In this rarefied state of self actualization, with an abundance of analytical and evaluative intellect, we expect not only to survive, but to improve upon our material and professional standing. More importantly, at this level, we also have a responsibility to improve upon our global life, and to help insure that succeeding generations will evolve upwards and forwards in a global caring, well fed, clean breathing, diversely friendly and coping culture.

Failure to properly prepare for and to effectively use our modern means for non-traditional education, to reach an increasingly larger population which cannot easily access traditional education, can result in a backward, downwards societal regression--a painful descension into a nightmarish, squalid, dark age class society of one quarter literate, and three quarters illiterate...and doomed.

We, as educators in this decade charged with bridging that gap, must be vigilant, knowing, and disciplined in how we entrust our decades-old learning theories and practices to a potentially abstract, robotic, coldly mechanized communications infrastructure and bureaucracy--half human, half chip, totally distant without a fiber of conscience and soul, or an education--Educators...faxing, data processing, computerizing, processing tons of hard copy, digitizing voice and text, and framing talking heads in a frenzy of informing and communicating...but alas, not communing or educating.

Distant Learning Media Technology

What are these modern technologies over and through which we dispense "distance learning?" How can they be harnessed and tailored to accommodate, support, and extend these key traditional learning principles for continued learning achievement in this distance audience? More specifically, what are their general identities and functions?

Distribution

Telephone (twisted pair and fiber optics); cable television (coaxial cable); satellite (K- and C- BAND--downlink, microwave); LPTV (Low Power TV--broadcast frequency); ITFS [(Instructional Television Fixed Service), or MDS (Multiple Distribution Service)--the commercial counter to ITFS--same narrowcast microwave frequency]; DBS (Direct Broadcast Satellite); and Video and Audio Cassettes and Compact Discs all provide for distant learning distribution using voice, text, audio, and video.

Origination Sources

CD-ROM; fax; computer; voice; data; and video are converted into electrical impulses and transmitted through wire, air waves, microwave frequencies, cable, and fiber optics to compatible receivers. In turn, the electrical impulses are then converted back to voice, data, and video for us to see, hear, and interpret. Regardless of the technologies and the non-linear communications, we as human beings are the ultimate senders and receivers. Our concern is with what happens at the send and receive sites because of the "in-between" channels and physical distance between two communicating individuals and/or groups.

ITFS

Of the above available technologies for distant learning, ITFS is perhaps the most available technology which can best be suited to fit OTA's media criterion for effective communications. ITFS is licensed by the FCC typically for 4-channels and 10-watt transmitters which can reach 20 to 25 miles depending upon tower height and terrain. The FCC promotes ITFS as an effective communications technology for education, and continues to issue licenses for most applicants if a frequency is available. ITFS's counter technology is a commercial duplicate called MDS, or wireless cable--a fast growing potential and actual competitor to cable television. This MDS competitor for cable television in an era of deregulation and continued charges of "monopoly" is what provides educational institutions with a very valuable bargaining chip for acquiring the necessary and expensive ITFS facility equipment to operate and service their license.

Excess Capacity--A Bargaining Chip

A 4-channel ITFS licensed institution must minimally program those four channels three hours per day, five working days per week. All of the remaining time outside of these FCC minimally required educational hours is called--"Excess Capacity." The bargaining chip is to trade that valuable time (especially the evening and week-end hours) to a local or distant actual or potential wireless cable entrepreneur or operator--who is already operating or wants to start up a commercial "wireless cable system" and compete for the approximately fifty percent of unwired or unsubscribing homes in an average cable/non-cable (urban-rural) locality.

The value is variable, but at MADISON AREA TECHNICAL COLLEGE (MATC), the 4-channel "excess capacity" was negotiated with the local "wireless cable" operator for a ten year, one dollar lease purchase for all four transmitters, two STL's (studio to tower links), and a maintenance agreement--worth approximately $250,000 for an installed and operating system. MATC provides the originating sources, i.e., studio and related equipment. But this "distant learning" media distribution system was acquired and installed by utilizing and leveraging, if you will, its license and potential excess channel time capacity.

Facilitating K-12 Programming: "Communing" and "Educating" Through Distant Learning

MATC's "Distance Learning" Network Fall Schedule

MATC's ITFS FALL, 1990 schedule combines acquired "enrichment" courses in science, geography, arts, and music from outside vendors; LIVE and tape delay satellite down link teleconferences for various grade levels with such titles as "Robotics in Space," "Kodak-Technologies of the Masters," and "Restructuring to Promote Learning;" a Message Center "electronic bulletin" board accessed by all ITFS members for daily information, and event schedules such as in-service training for faculty and administration; Associate Degree, 3-credit college video courses for high school juniors and seniors who want to get a head start in college course work; LIVE in-service seminars--and LIVE instruction in advanced mathematics and Spanish.

These courses are selected jointly by the participating ITFS-K-12 program committee composed of faculty and administrators from the school districts. The Wisconsin Department of Public Instruction (DPI) provides certification credence to the offering. The instructor is also hired by the participating school districts. For the latter a qualified instructor talks and visually communicates (communes) through the ITFS network directly into several participating school's classrooms. Although some of the criteria listed below for "taking the distance out of distance learning" can be applied to all of the above, for purposes of this paper, they are directed specifically to the "LIVE" "Distance Learning" instruction activity.

Optimum Classroom and Technical Criteria

1. Courses must be "locally distributed" and "locally taught" with instruction originating within a 20-25 mile radius from the schools, rather than regional or national origination.

2. Optimum students per class are 10 or less with a classroom faculty or faculty assistant person present.

3. Optimum technology is 2-way video and audio, but 2-way audio and 1-way video (TV instructor to classroom) will be common practice for several years.

4. Classroom student(s) must have a large screen or 25" monitor (for every 10 students) along with a push button-telephone return feed for asking questions and responding.

Instructor Criteria:

1. Must be a seasoned teacher (course content), teaching experienced, enthusiastic and committed to teaching in a "distant learning" environment with an "interpersonal" format.

2. Must be flexible, student oriented, and able to visualize herself actually transcending through the camera and receiver into the eyes and hearts of her "distant students."

3. Must be willing to provide the extra steps beyond "traditional classroom" requirements to assure learning and achievement.

Distant Learning (TV) Instructor (non-content) Methodology

1. TV instructor meets with classroom teacher monitors for orientation and social gathering before classes start to establish personal and professional ties.

2. TV instructor meets with all students in appropriate gatherings before beginning of course; so students can know and feel more comfortable with their instructor--develop a beginning "interpersonal" communication.

3. Instructor obtains student name lists with pictures for identification and for calling on students by their first name at individual schools during teaching for responses.

4. Instructor sends to each student after the first week of class or before class starts, a personalized greeting card welcoming each student to the class so the student will reaffirm and reinforce a closer tie to the instructor.

5. Instructor invites students from her distant classrooms to be with her and to respond regarding course questions and objectives during her course instruction.

6. Instructor holds at least one weekly teleconference after each week of classes with classroom teaching monitors to recap week's learning, review lessons and problems, continue communication and learning interest to maintain a close collegial and professional-personal relationship.

Summary

As you can see, "taking the distance out of distant learning," depends upon many related factors--signal integrity and fidelity, proper class sizes and receiving technology, a qualified course, course materials, and overall technical reliability. No one should be surprised, however, that the key element for achieving "learning" in distant learning" is not the technology, but the human element--the instructor, the students, the administrator, and the support staff, all of whom must understand basic learning practices and principles of instruction and communications. All must go the extra step to provide their very best to accomplish over the miles what we seem to be having such difficulty accomplishing today in our traditional, close up classroom--excitement and interest about learning, understanding, a sense of respect about school, fellow students, its teaching models, and self actualization--successfully "communing" and "educating" for a richer life and a better promise for tomorrow.

References

Critical Connections: Communication for the Future. Washington, D.C.: U.S. Government Printing Office, 1990.

Czitrom, Daniel J., Media and the American Mind. Chapel Hill, NC: 1982.

Gronlund, Norman E., Measurement and Evaluation in Teaching, 5th ed. New York: MacMillan, 1985.

Maslow, Abraham H., New Knowledge in Human Values. 1st ed. New York: Harper, 1959.

Shannon, Claude, and Warren Weaver, The Mathematical Theory of Communication. Urbana, IL: 1949.

Weaver, Andrew T., and Ordean G. Ness, An Introduction to Public Speaking. New York: Odyssey, 1961.

A PERSON AT THE OTHER END OF THE MODEM: LONG-DISTANCE DELIVERY OF STUDENT SERVICES FOR THE NUCLEAR SCIENCE DEGREE PROGRAM

Lori A. Haywood

Introduction

In the early 1980's, University of Maryland University College (UMUC) began development of a Bachelor of Science Degree in Nuclear Science designed to meet the unique educational needs of employees in the nuclear power industry. Currently, UMUC enrolls over 600 degree-seeking Nuclear Science students at ten nuclear power plants in eight states.

The Office of Special Programs (OSP) at the University of Maryland University College delivers the Nuclear Science degree on-site at nuclear power plants. This is accomplished through multiple delivery methods including computer-assisted instruction and Open Learning Program courses. Students interface with faculty and staff through the PLATO system, UMUC's toll-free telephone number, and frequent instructional and administrative visits. (For more detail on multiple delivery methods, see [1]).

There is significant concern that students scattered around the country at different nuclear power plants may feel isolated from the university and that such isolation may impede the learning process. Helping students at remote locations feel like vital participants in a degree program poses a challenge.

The Office of Special Programs has met this challenge by operating as a "mini-university" within the larger framework of the University of Maryland University College system. By doing so, OSP acts as the link between the students and University College. Because OSP serves a specific student population, the personnel can offer students personal attention in a timely manner. This paper describes how the Office of Special Programs supports the Bachelor of Science Degree in Nuclear Science by effectively delivering such student services as: curriculum development, academic counseling, and course registration and administration.

Lori A. Haywood, Academic Coordinator, Office of Special Programs, University of Maryland University College, University Boulevard at Adelphi Road, College Park, MD 20742-1663

Student Services Personnel

Many individuals and university offices provide the student services functions available to Nuclear Science students. The UMUC Office of Special Programs coordinates with the Offices of Admissions, Academic Advising, and Registrations for all Nuclear Science student-related activity. Additionally, an on-site administrator is appointed at each utility to serve as the liaison between the student and the university.

The Office of Special Programs

The Office of Special Programs serves as the singular UMUC office to administer and monitor the Nuclear Science degree program. The Office of Special Programs is the primary point of contact for all Nuclear Science students and on-site administrators.

Academic Coordinator. The Academic Coordinator oversees the collection of paperwork for Nuclear Science students, and is principally responsible for all admission, registration, and curriculum planning inquiries. Further responsibilities include reporting student activity to utility managers and assisting with course forecasting needs.

The Academic Coordinator makes annual site visits to conduct student counseling sessions and meetings with the on-site administrator. The coordinator utilizes student counseling skills and experience in academic advising whenever interfacing with students.

Assistant Academic Coordinator. The Assistant Academic Coordinator provides support to the Academic Coordinator and shares similar responsibilities in student admissions, curriculum planning, and course registrations. The Assistant maintains the continual flow of student admission and registration paperwork when the Academic Coordinator is out of the office counseling students at nuclear sites.

Office of Academic Advising

The Office of Academic Advising appoints trained academic advisors to provide support for the Office of Special Programs and Nuclear Science students. The academic advisors evaluate the students' official records from colleges and universities, standardized examinations, military and professional training programs, and other experiences which may yield credit toward the Nuclear Science degree. The UMUC advisors do not deal directly with the Nuclear Science students. All information is passed through the Academic Coordinator.

Office of Admissions

The UMUC Office of Admissions reviews the undergraduate application forms of prospective Nuclear Science students. The admissions office has an appointed representative to whom the Academic Coordinator submits all

Nuclear Science applications. The UMUC admissions staff provides each admitted Nuclear Science student with an official acceptance letter and a student identification card.

Office of Registrations

The Office of Registrations supports OSP in all course registration functions. The Office of Registrations rosters Nuclear Science students on class lists and final grade rolls, and records changes in registration and final grades.

On-Site Administrator

Each utility in the Nuclear Science program appoints an individual to serve as the on-site administrator. The on-site administrator conducts student support activities locally, and is the link between students at the nuclear facility and the administrators and faculty of UMUC. The OSP Academic Coordinator and the on-site administrator routinely coordinate on such student services functions as admission, course registrations, and curriculum planning.

The Office of Special Programs provides the on-site administrator with a Site Administrator's Guide. During the utility's orientation period, the administrator is trained on general academic policy and procedure, the utility curriculum plan, and required UMUC paperwork.

Curriculum Development and Planning

When a utility contracts with the University of Maryland University College to offer the Nuclear Science degree, a primary goal is to determine each student's academic status. The students are instructed to have all official documentation sent to the Office of Special Programs. In turn, an individual curriculum plan is created for each student. These individual curriculum plans assist in the development of the long-term course delivery schedule.

The Office of Special Programs generates several documents to assist the utility in curriculum development: 1) the curriculum planning sheet; 2) the summary academic plan; and 3) the five-year plan. These documents serve as resources for the students, utility administrators, and OSP staff.

Curriculum Planning and Development Tools

Curriculum Planning Sheet. The curriculum planning sheet is a record of the student's standing in the degree program. It is an assessment of each individual's academic status and indicates the following information:

*Transfer credit from previous colleges that is applicable to the Nuclear Science degree.

*Academic credit from other sources, such as credit conferred by examination; credit from the military (i.e., service school training, a navy rating or an army military occupational specialty); and credit earned for company-sponsored training programs.

*The amount and type of coursework still required for the degree being sought.

When evaluating student records, a maximum of 90 semester hours (s.h.) of transfer credit may be applied to the Nuclear Science degree. Ninety s.h. may be transferred from 4-year regionally accredited colleges or universities, and 60 s.h. may be applied from regionally accredited Junior or Community Colleges. Sixty semester hours are acceptable from standardized testing programs such as CLEP, DANTES, or ACT/PEP; 21 semester hours of vocational/technical credit are applicable; and miscellaneous credit from military and/or company sponsored training programs may be awarded as appropriate. Thirty semester hours minimum must be completed with the University of Maryland University College.

Summary Academic Plan. The Summary Academic Plan consolidates each student's individual curriculum plan into a concise document. Where the curriculum planning sheets document individual standing, the Summary Academic Plan presents the collective status of the utility's student population. As the Office of Academic Advising completes student evaluations, OSP develops the Summary Academic Plan for each utility.

The Summary Plan functions as an advising aid for the on-site administrator and OSP staff. If a student seeks advising on a specific course requirement, the on-site administrator or the OSP Academic Coordinator may refer to the Summary Plan to determine if the student has fulfilled the course requirement.

The Summary Plan also supports course forecasting needs. Utilities periodically attempt to supplement available UMUC courses with local college courses or CLEP testing on-site. By glancing at the Summary Academic Plan, the administrator can more accurately determine an appropriate course to offer as a supplement.

Five-Year Plan. This plan outlines the utility curriculum over a five year period. Using the individual curriculum plans and the Summary Academic Plan, utilities forecast for long-range course delivery. (For more detail on the Five-Year Plan see [2].)

The Five-Year Plan is available to each utility's students and site administrator. Using the plan as a resource, students can envision their academic schedules over the long run.

Academic Counseling

Academic counseling is an integral student support function. In a traditional program, students needing academic assistance may visit an on-campus advisor; however, the remote nature of the Nuclear Science student impedes on-campus advising. The Office of Special Programs utilizes alternate advising methods to overcome the barriers of counseling students at a distance. The methods used are: on-site advising, telephone advising, and on-line advising.

Academic Advising Methods

On-Site Advising--Orientation Visit. When a utility has contracted with UMUC, the Office of Special Programs travels to the site for a program orientation. The first formal advising session occurs at the orientation (For more detail about the on-site orientation, see [2]).

The initial counseling session is a 30 minute meeting with the Academic Coordinator. Each student is scheduled for a session, and at this time is presented with a curriculum planning sheet. Typically, the session includes a discussion of transfer credit awarded, remaining degree requirements, and options for accelerating the degree on one's own.

The orientation session provides important personal contact for the Nuclear Science students. The face-to-face meeting affords an opportunity for the students and the Academic Coordinator to establish their vital student/advisor relationship--a relationship that will last the balance of the students' time in the program. This personal contact opens the door to on-going communication.

On-Site Advising--The Annual Visit. Every year following the initial orientation meeting, the Academic Coordinator travels to each site for an annual visit. The purpose of the annual visit is to provide consistent advising support and maintain essential personal contact with the long-distance students.

Since students are acquiring credits between advising visits, the annual site visit also allows students to verify progress toward degree completion. For the annual visit, students are provided with updated curriculum planning sheets which reflect all UMUC courses and transfer credit completed since the previous visit.

Telephone Advising. Students are provided with the UMUC toll-free telephone number, and they are encouraged to use the number whenever they require assistance from administrators in the Office of Special Programs. The toll-free line is available to all students and on-site administrators during regular business hours.

Access to the toll-free line helps students at remote sites maintain a link with the OSP Academic Coordinator for curriculum planning support. Typically, students call with similar questions to those addressed in an on-site visit but that require a timely response: "Do I need the computer course that is available this summer?"; "Is there a CLEP examination I can take for my Humanities requirement?"; "May I complete the Calculus course at my local university?" These and other related curriculum planning inquiries are initially addressed by the Academic Coordinator; other UMUC offices are consulted as appropriate.

On-Line Advising. Although the students have the toll-free number to call with advising issues, they are not always able to use the phone during regular business hours. The central-PLATO system is available virtually 24 hours a day, and students may leave notes for the Academic Coordinator at any time. Students will generally have a response within a day's time. Although on-line advising provides no face-to-face or voice-to-voice contact between student and administrator, the technology affords the long-distance student an opportunity to maintain communication with UMUC faculty and staff.

Course Administration

Due to the remote nature of the Nuclear Science program, the Office of Special Programs oversees course administration that would normally be handled by other University College offices. By providing a single point of contact, OSP can ensure that all paperwork is received and distributed to the correct department. Consequently, all course registrations, registration adjustments, and faculty administrative matters are routed through OSP. Through effective course administration, OSP minimizes the barriers that long-distance students may encounter.

Course Registrations

When a UMUC course is available at a utility, all students who intend to participate in the course must be formally registered. At least 3-4 weeks prior to the course start date, the on-site administrator distributes UMUC SCHEDULE CARDS to students who want to enroll in the available course(s). Students complete the form and return it to the site administrator. After compiling the registration paperwork, the site coordinator forwards it to the Office of Special Programs. The Academic Coordinator submits all course registration forms in bulk to the Registrar. The Office of Registrations then creates the official class rosters and final grade rolls for the faculty member.

Routing bulk registrations through OSP fosters quality control. The Academic Coordinator monitors registrations to ensure that students meet appropriate course pre-requisites. Likewise, students needing credit (who did not register for the available course) are identified early in the registration process, and they are notified of their status in ample time to register for the course if they wish.

Registration Adjustments

Any subsequent changes in a student's original registration must be formally submitted to the Office of Registrations. If students wish to withdraw from a course or change their original status, they must contact the on-site administrator for the UMUC SCHEDULE ADJUSTMENT FORM. The site administrator forwards the form to OSP for processing.

Faculty

All course administration matters are handled by the Office of Special Programs, therefore, the Academic Coordinator is the liaison between faculty and the Office of Registrations. If a Nuclear Science faculty member has any questions regarding student registration at any point in the course, he/she may contact the Academic Coordinator for clarification. Faculty coordinate with OSP to resolve such grading issues as changes of grades and incomplete agreements. Once official grades are finalized by the instructor, the Academic Coordinator forwards the grades to the Office of Registrations for final posting.

Conclusion

The University of Maryland University College has developed a means of delivering a Bachelor of Science Degree in Nuclear Science to an industry with unique educational needs. In the nuclear power industry, such barriers to student progress as isolation of the nuclear facilities, rotating shiftwork, and unusual operating schedules require a degree program that is innovative and flexible. University College, through the use of computers, on-site administrative and instructional visits, and on-going communication between students and UMUC personnel, has created an interactive environment that encourages active participation in the Nuclear Science degree program.

The effective delivery of student services is vital to maintaining the personal element in this long-distance degree program. By providing face-to-face counseling and on-going telephone and computer access to the Office of Special Programs, the Nuclear Science students receive similar benefits as traditional students in an on-campus degree program. For OSP, the overriding goals of quality, service, and success in responding to student needs provides the "high touch" element for a "high tech", long distance degree program.

References

1. Myers, A. "Providing Educational Opportunities for the Nuclear Industry: The Role of Computers in the Nuclear Science Program." Paper delivered at the Eighth Annual Conference on Non-Traditional/Interdisciplinary Program, Virginia Beach, Virginia 1990.

2. Weese, E. "Meeting the Needs of the Nuclear Power Industry: The Bachelor of Science Degree in Nuclear Science." Paper delivered at the Eighth Annual Conference on Non-Traditional/Interdisciplinary Program, Virginia Beach, Virginia, 1990.

PROVIDING EDUCATIONAL OPPORTUNITIES FOR THE NUCLEAR INDUSTRY: THE ROLE OF COMPUTERS IN THE NUCLEAR SCIENCE PROGRAM

Alice M. Myers

Introduction

When an employee works at a nuclear power utility, they work varying shifts and are subject to the utility's operating schedule. In the early 1980s, the Nuclear Regulatory Commission proposed a regulation that would require all senior reactor operators to have a degree in a nuclear-related field. The nuclear industry was faced with an arduous task: find a way to educate employees in a timely and cost-efficient manner. A consortium of nuclear power utilities came to University College to develop a solution. The result is the University of Maryland University College baccalaureate program in Nuclear Science (for further information on program development, see [2]).

The Office of Special Programs (OSP) is responsible for the delivery of the Nuclear Science Program.This paper will discuss the role of computers in the Nuclear Science Program, how mainframe- and micro-computers are used in conjunction with traditional instructional methods to deliver major portions of the curriculum and how the student is oriented to this non-traditional learning format. It will also explore how the Office of Special Programs uses the computer to facilitate program delivery.

Curriculum

University College began the process of curriculum development by performing an industry-wide needs assessment. The purpose of the study was to design a curriculum that was relevant to the field. The results from the study were used in the Nuclear Science degree program.

Description

The curriculum includes courses in: (1) General Education Requirements (Calculus, Communication, Social Sciences, Humanities), (2) Courses Related to Concentration (Physics),(3) Primary Concentration (Nuclear Science), (4) Secondary Concentration (Science and Management) and (5) Electives.

Alice M. Myers, Technical Coordinator, Office of Special Programs, University of Maryland University College, University Boulevard at Adelphi Road, College Park, MD 20742-1663

Open Learning Format

To create the Nuclear Science curriculum, University College drew from existing courses in the Open Learning Program. This program allows the student to take courses in a guided-independent study format with periodic seminars. Most of the course work is done as text readings and written assignments. These activities can be done at a distance without losing course content. The Open Learning format is used to deliver the general, and management courses to the nuclear sites.

Computer-Based Format

Not all courses lend themselves to an Open Learning format. Because of the complexity of the material, some courses use computer technology to provide the student with an alternate method of instruction. The courses in this category are the prerequisite, primary and secondary courses. The Nuclear Science Program delivers these courses in this format:

MATH 115	Precalculus
MATH 140	Calculus I
MATH 141	Calculus II
PHYS 161	Physics I
PHYS 262	Physics II
CHEM 103	General Chemistry
ENNU 215	Introduction to Nuclear Technology
ENES 230	Materials and Applications
ENNU 217	Thermodynamics
ENNU 320	Reactor Operations
ENME 342	Fluid Mechanics
ENNU 450	Reactor Engineering I
ENNU 455	Reactor Engineering II
ENNU 460	Nuclear Heat Transfer
ENNU 465	Nuclear Reactor System Analysis

Instructor Visits

Courses delivered in either format have periodic instructor visits. For 3-4 credit courses, there are 4 visits and 6 credit courses there are 5 visits. For these visits, the instructor travels to the utility site. The classes, repeated up to 4 times per visit, are scheduled throughout the day as to accommodate the students either going on or getting off shift. During these classes the instructor lectures reviews homework assignments and conducts discussions.

PLATO Delivery System

PLATO, a Control Data Corporation product, is the delivery system that is used in the computer-based courses. PLATO can deliver courseware in two ways; on mainframe and micro-computer. Both methods are used in the program delivery.

Micro-PLATO

The micro-PLATO system operates as a stand alone micro-computer application. The student uses micro-PLATO to run course lessons. Participants receive customized disks for each computer-based course in which they are enrolled.

Central-PLATO

Central-PLATO is run on the Cyber mainframe located at University College. Central-PLATO gives the student access to on-line tests and electronic mail. To access central-PLATO, the student runs a PLATO emulation program that allows micro-computer to use the PLATO graphics and dials into the Cyber via a 1-800 number.

Courseware Components

The components of the courseware are: (1) PLATO Learning Management (PLM) tests; (2) Micro-PLATO Lessons; and (3) Student Workbook.

PLM Tests

The PLM tests are on-line drill and practice questions which students use as diagnostic tests. They are similar to class participation in traditional courses. Successful completion of all PLM tests is part of the student's grade. Each test covers one module of objectives. If the student does not master all the objectives in a module, learning activities are assigned for the unmastered objectives. These learning activities (i.e. text readings or micro-PLATO lessons) assist the student in learning the material. There is no limit on the number of times a student may take a PLM test. When a student retakes a test, they are only tested on unmastered objectives; hence, there is no duplication of effort.

Lessons

Micro-PLATO lessons give the student material that would normally be received during a traditional course lecture. In addition to new material, these lessons present the student with questions that help them gauge their comprehension.

Student Workbook

The student workbook is the user's guide to the courseware. While the syllabus guides students in their overall study plan, the student workbook guides students to the related courseware. The workbooks provide the student with introductions and summaries for both the module and lesson; lesson objectives; learning activities; and any course-specific information.

Delivery Features

A computer-based delivery system brings many features to the program delivery: (1) flexibility; (2) cost-efficiency; (3) unlimited access; (4) communication capabilities; (5) student tracking.

Flexibility

Students use the courseware as part of their individual study materials. The delivery system needs the flexibility to support the customizing of courseware. The lessons are written to accommodate the student studying extremely complicated material at a distance.

Micro-PLATO has detailed graphic capabilities and advanced question scoring. The graphic capabilities allow complicated graphics and animations to be included in the lessons. The advanced question scoring permits the courseware to give specific feedback to student input and to make allowances when evaluating student answers. These features give the instructional designer a wide range of tools from which to work.

PLATO has the basic question types: multiple choice (single and multiple answer); True/False; and Matching. In addition, PLATO has (fill-in-the-blank) questions which give specific feedback to student responses.

All these features can be combined together to assist the student learning process. An example of this can be found in the Thermodynamics course, in a new type of question called **calculate**. Most engineering questions require complicated calculations. These calculations can sometimes take 30 to 45 minutes to complete. If one of these questions is written as a fill-in-the blank question, a student would have to solve the entire problem, enter the answer and see if the answer is correct. Calculates were developed to guide the student through the problem solving process, with feedback at each step, rather than allowing a student to work for 30 to 45 minutes, only to find out they were using the wrong equation.

A calculate presents the student with the problem statement (and diagram if appropriate). The student selects the equation they should use from the student workbook. If the student does not enter the number corresponding to the correct number after three attempts, the computer will give the student the correct answer. The student is then similarly guided through simplifying the equation, solving for all the knowns and finally solving for the unknown. Because student are getting feedback throughout the process, they know immediately if they are on the right track.

Cost-Efficiency

The delivery system must be inexpensive to implement and maintain. The software cannot require any expensive hardware. Startup and ongoing cost, need to be kept at a minimum.

The equipment that must be purchased to run PLATO is an IBM PC or IBM PC compatible computer with a modem. PLATO disks are purchased and/or licenced from Control Data Corporation. After the initial purchase of the computers and the diskware is made, the largest ongoing cost is telecommunications. By mixing micro- and central-PLATO in the course delivery, the most time-consuming studying is done off-line rather than on the mainframe. This allows the student to have access to the computer without producing excessive telecommunications costs.

Unlimited Access

The students work rotating shifts and work on their course assignments when they get home. Studying can often take place at 3:00 am; therefore, the system must be accessible when the student needs it. With the rotating shifts, accessibility had to be as close to 24 hours a day as possible.

Micro-PLATO is run as a stand alone application. It is always available. Central-PLATO is run on the Cyber at University College. It is also available 24 hours a day excluding system maintenance.

Communication

Because of the remote nature of the program,communication between students, faculty and program administrators is vital. There are several communication links between the students and the staff.

University College has a 1-800 number that students use to contact Special Programs staff during working hours. Since many students study during non-business hours, an supplementary communication mechanism had to be established. This additional communication is provided by the central-PLATO system.

The central-PLATO system provides an extensive notesfile system which allows students, faculty and staff to leave notes for each other whenever central-PLATO access is possible.

Central-PLATO also allows students to communicate with the on-line consultants. If a student has a question while on central-PLATO, he/she can access a help facility which will alert the consultants that a student has a question. There are several features on central-PLATO that the consultants have at their disposal: the ability to "talk" interactively with students on the computer and the capability to see what is on the student's screen. By using these resources on the PLATO system, the consultants can help the students with any on-line problems.

Student Tracking

Using the notesfile system, a student can ask others for help with course material. However, not all students know when they need help, there needs to be a way to identify students who are having problems in a course.

Central-PLATO's PLM tests have data collection facilities that generate statistics on student completion rates. These statistics are used by the instructor, utility site administrator and Special Program staff to measure the student progress. If a student is not the class pace of the PLM, there is a good indication that the student is having a problem with the course.

Student Orientation

When a utility starts the program, the Office of Special Programs provides a student orientation. This orientation provides many student services: orientation to the program, academic advising and a computer workshop. (For details on orientation overview see [2], for details on academic advising see [1]).

Many students come into the program with little or no computer background, and experience with computer-based courses is rare. During the computer workshop, the student is taught all the concepts they will need to know to take a computer-based course: (1) Hardware and DOS, (2) Telecommunications and (3) PLATO.

Hardware and DOS

In some cases, when students enter the program, it is their first exposure to computers; therefore, it is necessary to give them a brief introduction to computers. The student is taught how to unpackage the system, cable it together and to turn it on. The hardware introduction teaches them the different components of the computer and their function.

In order to run the PLATO applications, students must know a certain amount of DOS to be able to run the applications properly and to install new software when needed. In the DOS orientation, they get hands-on experience with the basic DOS commands. Students are also given basic rules on care of the hardware and the software.

Telecommunications

Students connect to the Cyber by using a 1-800 number to dial into a public data network. Students are shown what happens when they dial into the Cyber and the places where possible breakdowns occur. This part of the orientation teaches students how to distinguish between a long term and a short term problem and how to help the technical staff efficiently resolve problems that might appear.

PLATO

There are three major topics that are covered in the PLATO portion of the computer workshop: (1) the courseware components and function, (2) how to study using these components and (3) the mechanics of using the components.

After explaining all the courseware components, the student is told how to use all these components in his/her individual study method. There are several ways that the student can approach their studies.

For example, a student at a utility requires he use of many concepts found in the General Chemistry course. But he does not have the credit for a college-level Chemistry course For that student, an option might be to take the PLM test as a pre-test. The PLM will assign learning activities for the objectives that are not mastered. That way, students can determine the topics on which they need to focus their studies rather than spending time studying material they already know.

Continuing with that example, if the student is taking Reactor Operations and has no reactor experience, he/she would probably have very little success in taking the PLM tests. Rather than fail a pre-test, they would look in the student guide for the learning activities, study them and take the PLM test as a post-test. The student can then isolate any objectives that were not totally mastered in the studying.

By using the PLM through out the course, the student can gauge their own progress and readiness for taking exams.

Faculty Use of PLATO

There is an instructor assigned to each course section that is delivered. Prior to having instructors teach a course in the Nuclear Science Program, the Office of Special Programs orients the instructor to the issues involved in teaching a course at a distance. Additionally, instructors teaching a computer-based course are given an introduction to the PLATO system.

Every instructor is taught how to sign on to the computer, how to read/write notes to/from the students and staff and how to use the PLM report generator. By using the reports from the PLM, faculty monitor student progress throughout the course.

As part of the student support supplied by OSP, instructors are required to sign on to central-PLATO daily to monitor student notes. By requiring the daily sign on, this ensures that student question will be answered within a maximum of 24 hours.

Daily Use of PLATO

By using the PLATO system to monitor student notes and progress through the program, the staff in the Office of Special Programs can overcome the distance barriers between the student and the University and provide a level of service that would not be possible without the computer.

Through use of statistics generated from the PLM, it is possible to monitor students progress throughout the course. The PLM status reports are generated weekly by OSP staff. If the statistics indicate that a student is falling behind, the instructor and utility personnel are notified. By examining these weekly reports, students can receive help before the situation becomes serious

The staff of the Office of Special Programs reviews the system notes daily. Because of this monitoring, by faculty and staff, students have a constant source of assistance, information and support. When students leave notes, sometimes the students need help with a math equation, other times they just need to know that there is someone out there listening to them. By using the computer notes, the students feel less isolated and they know that they have a reliable source of contact.

The Office of Special Programs has two Technical Coordinators who support the computer-based courses. Technical Coordinators answer questions about the use of the courseware, resolve problems with hardware and telecommunications and read all the student notes for all utilities. They spend most of the business day on central-PLATO monitoring the student activity. Because they are on the system daily, they can determine patterns of activity and anticipate problems with a student, particular course or utility.

Future of computers in the Program

As the program grows, the role of computers in the program continues to grow. There are currently two courses that are being developed in the computer-based format: Differential Equations and Modern Physics. The PLATO system will be used into some of the Open Learning course as a communication tool. In addition, automation some of the orientation on the computer is being explored. Computers and the PLATO system will continue to improve the level of service that the Office of Special Programs provides its students and clients.

References

1. Haywood, L. "A Person at the Other End of the Modem: Long Distance Delivery of Student Services in the Nuclear Science Program." Paper delivered at the Eighth Annual Conference on Non-Traditional/Interdisciplinary Program, Virginia Beach, Virginia, 1990.

2. Weese, E. "Meeting The Needs of The Nuclear Power Industry: The Bachelor of Science Degree in Nuclear Science." Paper delivered at the Eighth Annual Conference on Non-Traditional/Interdisciplinary Program, Virginia Beach, Virginia, 1990.

VIDEOTAPES AS TOOLS FOR PROGRAM DEVELOPMENT

Shirley W. Neal

Introduction

Frequently, new, nontraditional programs for adult learners are expected to become established with few resources. Initially, the budget may allow for only a lean staff consisting of a director with perhaps one or two supporting staff. What has been happening across the nation, however, is that the enrollment numbers in adult programs have risen so rapidly that all too soon a program's staff finds itself strained beyond the limit to provide adequate support services to their students. At this point, program quality becomes threatened.

It is generally understood, at least among those who work with adult learners, that students who have been away from academia for a number of years and who are combining the pursuit of higher education with the responsibilities of family, home, career, and community, usually require more, rather than less, in the way of support services. A student applying for admission needs information about the nature of the program involved, about degree requirements, about transferring previously earned credit, about options and opportunities which exist for earning the additional credit needed to complete the program, and more. Those who opt to request prior learning assessment (PLA) will need instruction and advisement in regard to portfolio preparation. How is a program director to provide all of the student services required and still fulfill the other responsibilities of administering, developing, and promoting a new degree program?

One answer to the problem can be found in using the program videotape to stretch staff services. A well-prepared videotape provides a number of advantages. It not only saves staff time, it saves the busy adult learner time. It can be viewed at convenient locations, even the student's home. Secondly, a videotape provides efficient, comprehensive coverage of material without digression; and thirdly, a videotape is a dynamic and dramatic way of presenting information which results in a more impressive and memorable experience.

This paper will address the subjects of how videotapes may be used beneficially to develop and promote a nontraditional degree program for adult learners; how to produce a videotape; and finally, how to secure funding for such a production.

Shirley W. Neal, Ph.D., Director, Board of Governors BA Degree Program
Eastern Illinois University, Charleston, IL 61920

Benefits of a Program Videotape

Efficiency

We have said that videotapes can be time-savers. A videotape produced by the program director will be a reliable source of information from which new admittees can receive an overview of a program, orientation, and even specific instructions and advice on how to proceed. It can provide a basis for a follow-up discussion between advisor and student or alternatively, if viewed after, rather than before, an initial meeting with an advisor, it can reinforce and supplement the information covered in an earlier interview.

Because it provides comprehensive coverage of information in a specific length of time, a videotape can be used to advantage as a part of a presentation when time is a factor. For example, when speaking under the time constraints imposed at a professional luncheon meeting, the speaker who uses a videotape will be assured that all essential details have been included in the presentation. Moreover, the video can serve as a springboard for audience questions and comments. In our visually-oriented society, the audio/visual aid has become more important than ever as a time-saving device for getting the message across in a dramatic manner, one that creates a more vivid and more memorable impression.

Enriched Content

Another benefit of a videotape is that it provides evidence of a program's excellence which would be awkward or impossible to present otherwise. In a video the audience may be given the opportunity to see and hear from previous students describing their own experiences and level of satisfaction with the program. It may gain a faculty perspective on the program and receive advice and instruction concerning portfolio development. Additionally, when statistical data and historical information are presented visually as well as orally, the impact upon the audience is heightened. For instance, mentioning a program award is good; showing a picture of the actual award is better. An impressive video presentation helps to attract the best and brightest students to the program and it can serve to support and reinforce the university's mission and goals statement.

Reliable Record

When videotapes are used as a regular and consistent part of student orientation, advisement, and instruction, the advisor has an indisputable record of the information that has been provided. This eliminates the chance that vital information might be omitted and ensures the program director as well as the student that all details have been covered. In instances where a student obviously has missed or miscomprehended information, it is a simple matter to provide an opportunity for that student to review the material by viewing the videotape a second time. In this way, any doubt or misgivings a student may have had concerning the thoroughness of program advisement is quickly cleared up and unwarranted complaints are forestalled.

Shared Experience

Finally, a benefit which may not be immediately apparent but which surely is worth considering is that the videotape portion of a nontraditional program for adult learners provides one experience, at least, which all students share. Shared academic experiences among adult learners are rarer than they are among the traditional, in-residence student body. The videotapes, then, become one experience students recognize as something which all others in the program have witnessed, thus offering a sense of connection. By actually involving students and graduates in the production of the videotapes, staff provide a bonding experience for the adult learners and an opportunity to feel that they have made a valuable and lasting contribution to the university.

Summary

In summary, a videotape is a valuable tool for program development when it is responsibly prepared with the direct involvement of the person in charge of the program and when the information contained in the video is accurate, comprehensive, and inspirational. Program videos used to promote a program and/or to instruct students stretch the budget, ensure complete coverage of information, increase effectiveness of presentations, provide a record of the information covered in advisement sessions, and give students and graduates a sense of shared participation and belonging.

Developing a Program Videotape

Introduction

Having recognized its usefulness, one turns to the problem of developing a videotape. The process can be described as a five step procedure. The first requires determining audience, purpose, and theme; the second involves preparing the script and the shot list; the third includes securing the cooperation of participants, planning an itinerary and schedule, and shooting the raw footage; fourth is filming and/or recording the narrator's part, selecting background music, selecting and preparing graphics and an acknowledgement list; and the fifth and final step is the editing and technical production of the videotape.

Determining Audience, Purpose, and Theme

Step one, as in any undertaking, is the most difficult. Once the audience, purpose, and theme can be clearly stated and found to be a reasonable undertaking for the length of the video planned, the rest falls more easily into place. For example, the producer must consider such questions as, "Is this video for prospective students? current students? university faculty and administrators? the general public?" To get at the specific purpose, one might ask, "Is the purpose of this video to be primarily informational or instructional?" To phrase the question another way, "Is its intended use to be program promotion or portfolio advisement?"

To arrive at a succinctly stated theme, consider what question the tape will answer. For example, is it "What are the requirements of this degree, that is, requirements for admission and requirements for graduation?" Or is it, "How can a student earn credit for prior college-level learning which is not already reflected on a transcript from a regionally accredited college or university?" Step one is essential, fundamental, and challenging. But once these questions are answered, the fun begins.

Preparing Script and Shot List

In step two the executive producer must exercise creativity and imagination. Simultaneously, one writes the script and visualizes the images necessary to convey the message. It is important to remember here that since this is a videotape, the audio supports the visual portion, not the other way around. An image on the screen should last, at most, about a half a minute or so, depending upon whether it is stationary or moving, silent or speaking. The images one uses will condition the script segments one will prepare. Let us consider the handout you have before you as an illustration of a prepared script with an accompanying shot list. The intended audience of the video in this illustration includes prospective students, university faculty and officials, and the general public. The purpose is to provide understanding of the nature of a unique and nontraditional college degree program and the specific clientele it serves. The theme defines the value, diversity, flexibility, standards, and reputation of the program.

Field Work

In step three, even before the field work can begin, the executive producer must secure the technical producer's approval of the script and the shot list. When this has been done, the executive producer secures the permission and cooperation of the cast of characters, collects their witnessed signatures on release forms, and plans an itinerary and schedule for the field work. Now the actual on-site filming begins. The technical producer in collaboration with the executive producer will oversee the camera crew to ensure that sufficient footage is being collected and that camera angles and distance choices are appropriately proportioned. It is essential to have plenty of video coverage for the script because much of the footage will end up on the cutting room floor.

Studio Work

Step four takes place back in the studio. Here the narrator's part in the production is filmed or if the narrator will not appear on camera, the audio is recorded. If this step requires the narrator's use of a telepromptor, some practice may be advisable before the camera is turned on to make sure that the narrator can read the script from the camera's distance. Next, background music is selected, graphics are prepared, and a list of names to be included in the acknowledgements is determined. Most of this work is accomplished by the technical director although it usually will require the cooperation and assistance of the executive director, especially in preparing the list of acknowledgements and in choosing appropriate background music and graphics details.

Editing

With step five, the executive producer essentially fades into the background leaving the technical producer to select the most effective and dramatic visuals and to edit the raw footage. The technical producer may wish to consult the executive producer from time to time as s/he makes decisions about which shot is preferable in a given instance. The technical producer combines the narrator's portion and the background music with the visuals and inserts the title portion at the beginning and the final portions at the end. When the video is ready for screening, the executive producer sees that no corrections or additions are needed and gives the finished product final approval.

Demonstration

This video is the final product of the script and shot list we just reviewed. It is approximately ten minutes in length. Can you determine the intended audience? the primary purpose? the main idea? Do the images effectively convey the message? Are music and graphics effective and supportive?

Funding a Videotape

Involving Students and Graduates in Funding

There are various ways to secure funding for the production of a program videotape, but one should recognize at the outset that this is a relatively expensive undertaking costing several thousand dollars.

Until developing a system incorporating the involvement and support of students and graduates, I was frustrated in attempts to secure sufficient resources to produce program videotapes.

For the last four years, in cooperation with the Director of the University Foundation, I have organized and conducted an annual telefund for the promotion and support of the Board of Governors Bachelor of Arts Degree Program at Eastern Illinois University. The project requires a great deal of time and effort but it does pay off. Organization of a telefund entails recruiting approximately forty students who telephone about one thousand graduates, or as many of these as can be reached in four evenings of calling, to request their support and contributions. Though we experienced some initial apprehension about this project, we quickly discovered that the overwhelming majority of graduates called were pleased to hear from current students and to chat about the program from which they had earned their degrees. Telefund results prove that graduates are more than willing to assist with generous contributions for the promotion and development of the EIU Board of Governors BA degree program.

The annual event, in addition to raising an average $7,500 per year, has become something of a social event to which students, graduates, friends, and supporters look forward. Perhaps at another university, funding would be available without involving students and graduates. However, an added benefit to the monetary proceeds engendered is the resulting spirit of cooperation, connectedness, and belonging it inspires. Adult learners, not unlike the younger students in traditional programs, want and need to identify with their *alma mater*.

Conclusion

A program videotape supplements in a dramatic and forceful manner all of the other publications and personal presentations offered by program personnel. Because it provides memorable images, includes the testimony of reliable and impressive witnesses, and covers a subject in a timely, yet comprehensive manner, this modern-age audio/visual aid plays an important and dynamic role in the development of any university program.

I welcome your questions and comments. In addition, if anyone wishes to remain, I shall be happy to share and discuss other videotapes I have with me as well as tapes of television programs which incorporated clips from our program videotapes.

Further Viewing and Reading

Neal, Shirley W. *The Eastern Illinois University Board of Governors Bachelor of Arts Degree Program*. WEIU, Charleston, IL, 1988.

________________. *Portfolio Development*. WEIU, Charleston, IL, 1988.

________________. *The Portfolio Option*. WEIU, Charleston, IL, 1986.

Zettl, Herbert. *Television Production Handbook*, Fourth Edition. Wadsworth Publishing Company, Belmont, California, 1984.

ALTERNATIVE INSTRUCTIONAL APPLICATIONS OF ELECTRONIC MAIL

Tim Peterson

Introduction

Electronic mail systems are being used increasingly around the country for alternative instructional applications in higher education. Houston Community College, the University of Virginia, and Syracuse University are just a few of the many institutions that are using such systems to link faculty and students together across time and distance. Montgomery College, a multi-campus community college located in the Washington, D.C., suburbs, and the Academy for Educational Development are currently conducting research on the instructional and cost effectiveness of electronic mail (e-mail). The research is being supported in large part by a grant from the Fund for the Improvement of Postsecondary Education (FIPSE).

The initial research followed a quasiexperimental design in which different courses were taught by both e-mail and by traditional lecture methods. Most variables (e.g., instructors, texts, assignments, etc.) were held constant: 1) to determine if students could use e-mail effectively to learn different subjects; and 2)to see if e-mail was cost effective for both the institution and for students. The College is now testing the efficacy of the system in combination with existing telecourses and eventually plans to make the system the nexus of an accelerated General Studies degree program. A brief review of the FIPSE research project, the problems and results of the project, and our future plans are the topics of this paper.

The FIPSE Project

The original FIPSE proposal was the work of Dr. Don McNeil, a senior program officer at the Academy. It was to be a three year project that would take two different courses each year and compare the results of teaching each of them in three different ways: by computer conferencing (e-mail), by traditional lecture/discussion, and by a combination of the two methods. The mixed e-mail/lecture component was eliminated before the research project was initiated.

Tim Peterson, Dean of Extended Learning Services
Montgomery College, 51 Mannakee St., Rockville, MD 20850

All variables (e.g., instructors, texts, assignments) except the instructional method and the assignment of student groups were to be held constant. We could not, nor did not want to, randomly assign students to the different groups. Rather we collected data on what we considered to be the relevant demographic, economic, and academic characteristics to determine the similarity between groups. We recognized that any significant differences would restrict our ability to generalize from our findings. It should be mentioned that the original proposal used the terms computer conferencing rather than electronic mail. The difference is that the former provides for group discussions as well as individual messages whereas not all e-mail systems have a group discussion capability. Although our system has the group discussion feature, we eventually adopted the latter terms because we thought it would be more familiar to our students.

We began the project in the Fall of 1988 with an American history course and a health course. The courses were selected for three reasons: there were multiple sections, which would allow for the easy identification of the comparison lecture sections; they met general education distribution requirements and thus (we thought) would increase our ability to recruit students into the experimental sections; and, most importantly, we had two faculty members who were excited about the project.

Research Assumptions and Hypotheses

On the bases of our professional experience and familiarity with the relevant literature, we assumed that:

> e-mail offered several advantages over the traditional lecture method (e.g., students did not have to travel to campus, they could send and receive messages or assignments any time day or night, they might improve their writing skills, and they might learn something about computers and telecommunications); that
>
> many part-time, adult students would own or have access to personal computers (Montgomery County has the fifth highest per capita income in the country and is home to numerous high-tech firms); and that
>
> the College would increase the utilization of its mainframe instructional computer, which was operating below full capacity.

We hypothesized that students could use the system effectively for learning different subjects and that it could be cost effective for both students and the College. Before describing some of the problems we encountered in conducting the research, it may be useful to recall an observation by Howard Becker (1965) from a quarter-of-a-century ago:

> The best laid research plans run up against unforeseen contingencies in the collection and analysis of data; the data one collects may prove to have little to do with the hypothesis one sets out to test; unexpected findings inspire new ideas. No matter how carefully one plans in advance, research is designed in the course of its execution (p. 602).

Technical Problems

We encountered two major technical problems and a host of minor ones. We had chosen an integrated PC software package for the faculty to use in conjunction with the e-mail system because of its power, compatibility with other software, ease of use, and low cost. However, the mainframe required the use of a specific albeit free communications program that limited users to IBM compatible machines. The communications software proved to be the first major problem because it did not interact well with the original e-mail software. The second major problem was the e-mail software, which did not run well on our mainframe computer. Ultimately, we abandoned the mainframe and the original e-mail software and set up a bulletin board system (BBS) on an AT type personal computer that allowed faculty and students to use a variety of hardware and software. This was accomplished through the efforts of Ben Acton, a telecommunications faculty member who had been granted release time to assist us with the project.

Other Problems

A significant and unexpected problem was the need for increased marketing of the e-mail courses. Only four students enrolled in the first e-mail section of the health course and none in the history course during the 1989 Spring semester. We discovered from the comparison lecture sections that most students had personal computers, but very few had modems or communications software. Thus we increased our marketing for the 1989 Fall semester and purchased both modems and software to loan to students who needed those resources. We enrolled 13 students in each of the two e-mail sections that semester.

In preparing the second year FIPSE proposal, we decided that we would test the ability of the e-mail system to enhance student learning in our existing telecourses rather than continuing the e-mail only course research. We assumed, erroneously, that telecourse students and faculty would be more inclined than their campus peers to use the system. We provided the faculty with laptop computers and software and encouraged them use to these resources for any other purposes they desired. We were aware of the difficulties encountered by another institution that attempted to do this several years ago but felt confident that we could avoid most, if not all, of those problems through appropriate training and technical support.

Results of the Research

The technical and marketing problems notwithstanding, the results of our research are both enlightening and encouraging. We currently have 16 students actively participating in the e-mail section of the American history course and another dozen telecourse students are using the system as well. Six of the 11 telecourse faculty are now on the system and we probably would have had more except that a delay in the delivery of the laptop computers limited the amount of training that we could provide faculty prior to the start of classes this semester.

Students enrolled in the courses shared many of the same demographic and other characteristics. Students in both types of courses were predominately white, in their thirties, working full-time, with similar academic backgrounds. A greater proportion of women were enrolled in the lecture sections than in the e-mail sections.

With respect to the instructional efficacy of the system, we found few real differences between the students in the e-mail and lecture course sections. Student performance as measured by pre/post test scores, course assignments, final exams, and final grades was generally comparable between the e-mail and lecture sections.

Students in the e-mail sections generally agreed that the e-mail system increased their confidence in working with computers and improved their writing skills. The attrition rate for the history e-mail course section was the same as that for the lecture section but much higher for the health e-mail course section than its lecture counterpart. We suspect this was because the history instructor placed a much greater emphasis on discussion than did the health instructor. All but one of the students who completed the e-mail sections indicated that they would take another course via the system.

The data thus far also suggest that the system can save students both time and money. Although the e-mail students spent about 50 percent more time on course assignments and readings than the lecture section students, they saved approximately one and a half hours a week by not having to commute to campus. They also saved about $45 per semester on transportation costs. Only two students reported having to spend additional money on computer equipment or supplies to take a course by e-mail.

Whether or not the system is cost effective for the institution remains to be seen. The start-up costs can vary significantly depending upon the configuration of the system. We spent approximately $6,000 for the BBS hardware and software although you could spend considerably less for a less sophisticated system. We will spend about $19,000 on salaries this year to set up and operate the BBS. However, this figure can be misleading because it reflects the cost of using part-time faculty rather than the actual full-time faculty who provided the technical support for the system. Nevertheless, we believe that the on-going operational costs of the system will prove to be reasonable, particularly since the existing College classroom facilities are already being used to full capacity and that plans to build new facilities have been delayed because of state and local budget constraints.

We also provided faculty the same amount of release time to adapt their courses to the system as they normally received for teaching the courses. Most of their time was spent on learning the system, facilitating student discussion, and uploading and downloading files on the system. We think that the work of these "pioneers" will be very helpful to other faculty who use the system in the future.

Future Plans & Potential Applications

Given the proper marketing and support services (e.g., better documentation and training) we believe that the e-mail system cannot only enhance student learning, but that it can be used effectively for related applications as well (e.g., advising, tutoring, student study groups, etc.). Thus, we plan to use the system as the infrastructure of a new accelerated degree program in General Studies that part-time students will be able to complete in three years by taking one evening, one weekend, and one telecourse a semester. In addition to being extremely convenient, the program will expose students to a variety of alternative instructional methods which we think will enhance their ability to acquire and process information in an increasingly complex world.

Finally, we are hopeful that the numerous features of the system (e.g., a 64 phone line capability with on-line interaction, a library, etc.) will provide students the chance to create a learning community similar to that found in a residential program, an opportunity that commuter students rarely find on today's campuses.

Reference

Becker, H. S. (1965). Review of P.E. Hammond's Sociologists at Work. American Sociological Review, 30, 602-603.

ENHANCING TELEVISED OFF-CAMPUS PROGRAMS THROUGH FACULTY TRAINING

Arnold E. Seigel
Cynthia Davis

Introduction

Television has delivered educational programming since the early fifties. From the beginning, the issues of technical quality, cost-effectiveness and educational efficacy have been raised. Numerous studies have addressed these issues (Seigel and Davis, 1990; Gibbons, Kincheloe and Down, 1977; Chu and Schramm, 1975) and have provided evidence that television is technically advanced and cost-efficient and that television students learn as well as do on-site students. However, resistance to televised education still exists (Nickens, 1990; Davis, 1988). Faculty reluctance to teach via television is one of the most significant drawbacks to televised instruction today.

The authors, Director and Assistant to the Director, respectively, of the Instructional Television System in the College of Engineering at the University of Maryland, College Park, find that persuading instructors to accept a television class, and then providing the training and support required by the instructors, is one of the most challenging aspects of their jobs. In response to this challenge, they have developed a training program which is rather unique in the United States.

The University of Maryland Instructional Television System

The University of Maryland's Instructional Television System (ITV) is an innovative broadcast network, providing high quality, graduate-level courses leading to master's degrees in engineering, computer science, and management. Ranked in the top four university microwave broadcast systems in the country, ITV uses some of the most sophisticated and complex communications equipment available. Its fundamental concept, however, is strikingly simple: to provide live, interactive broadcasts of University of Maryland courses to part-time students who are employed full-time in high-tech companies.

ITV was established by the University of Maryland's College of Engineering in 1976 and began broadcasting in 1980. Many of the region's most prestigious public and private organizations are regular subscribers. They include IBM, the National Security Agency, NASA, the Naval Research Laboratory, the Bureau of the Census and Aberdeen Proving Ground.

Arnold E. Seigel, Ph.D., Director, Instructional Television System, University of Maryland, College Park, Maryland
Cynthia Davis, Assistant to the Director, Instructional Television System, University of Maryland, College Park, Maryland

ITV is also one of 25 graduate schools of engineering which form a consortium called the National Technological University (NTU). The mission of NTU is to serve the needs of graduate engineers and technical professionals and to provide both master's degrees and noncredit professional development courses to the entire United States via satellite.

Although most ITV classrooms are set up on-site at the participating company's own location, shared classroom facilities (so-called "open sites") have been established for groups of firms who wish to send only a handful of their staff members. Individual students can take courses independently at these sites, too. Students at open sites receive the same service as those in company-sponsored classrooms. To date there are two open sites, one in Montgomery County (Shady Grove Campus) and one in Washington County (Hagerstown Community College).

From four specially equipped classrooms at the University's College Park campus, ITV beams courses by microwave to remote classroom locations in companies and government agencies throughout the Washington metropolitan area, and by NTU satellite to almost 200 companies nationwide. Students view the classes live at their workplaces as the courses are being taught in College Park. The key words here are live and interactive. These classes are broadcast as they take place on campus. To facilitate communication, each remote classroom is equipped with a telephone talk-back system so that off-campus students can take an active part in a class as it progresses. In addition there is a daily, two-way courier service to each Washington-area location. The ITV couriers deliver syllabi, class notes and handouts, and bring homework assignments back to the ITV office on campus. A special service is the televised registration in which a university registrar walks students through the registration process.

Faculty Concerns About Television Teaching

Despite the sophisticated technology and the excellent support services, many faculty members resist teaching on television, and there are some legitimate reasons for this opposition.Many faculty members at the College of Engineering are comfortably established in their academic routines. They have tenure, their classes are filled to capacity, and they are often nationally known experts in their fields. They are extremely busy with other activities including research and consulting. Television instructors do not receive extra pay, although their departments receive a modest sum for each remote-site students. Thus, there is little to motivate these faculty members to move into television.

Fear of the unknown is, of course, a key factor. Faculty members fear that television will mean increased work, frustration, inability to communicate with off-site students, and exposure of their own weaknesses or idiosyncrasies. Few engineering faculty have problems with the actual equipment, but it is possible in other disciplines that technological anxiety about cameras and microphones might be an added deterrent.

Another concern is exam security and the logistics of transmitting homework. Many engineering instructors give two major exams for which a considerable amount of material must be learned and memorized. In order that exams be distributed to television students, instructors must release the exam two days in advance. Understandably, instructors dislike relinquishing control of their exams. If cheating occurs, the credibility of the department and the school is jeopardized.

Limitations and Constraints of T.V. Teaching

There are, of course, some constraints involved in television teaching. First, timing is much more critical. Teachers must not run overtime, because the next class is scheduled for broadcast at a precise time slot. Many instructors dislike "watching the clock" and are accustomed to completing their lectures without precise regard for minutes. In addition to having to begin and end on time, extra time is required to answer questions from off-site students. Even though only seconds are involved, the interaction appears to require more time and concentration than it would in a regular classroom. Off-site students also require more active, verbal encouragement from the instructor to participate orally.

Another issue is the need for advance planning. Because of the turnaround time involved in disseminating material to remote sites, an instructor cannot have a brilliant, last minute brainstorm and rush in to reproduce an article or worksheet right before class.

Minor constraints involve limited physical movement within the classroom, and appropriate dress. An instructor who tends to pace back and forth or move too quickly from desk to board will lose the camera. It is frustrating for off-site students to hear a disembodied voice coming from the side of their screen. While instructors do not have to dress or makeup for the camera, certain colors, patterns and fabrics will present interference. White shirts will distort the color balance of the instructor's complexion, shiny jewelry will reflect light, loud stripes will be distracting, fuzzy sweaters will make the microphone crackle, and so on.

Advantages of Television Teaching

There are, of course, some real benefits to teaching on television. The classrooms are beautifully outfitted and very comfortable. The microphone enables an instructor to speak quietly even while addressing an on-site class of sixty students. If an instructor needs to miss a class, he or she can arrange to pre-tape and the class will be shown at the regular time to both onsite and offsite students. Videocassettes or films are easily incorporated into the class without the need to rent or borrow additional equipment. The overhead camera can enlarge and show small charts, graphs or objects which ordinarily could only be seen by a few students. Often, the educational experience is enhanced, because instructors do tend to prepare more carefully for televised courses. Finally, many instructors enjoy the fact that offsite students can watch and rewatch tapes of their classes. This provides for reinforcement of the material and allows students to learn at their own paces. Some universities make provisions for on-site students to watch the tapes at libraries or media centers.

The ITV Faculty Training and Support Program

How does one convince faculty of the advantages of television, while helping them to overcome the negative, or negatively perceived, aspects of the medium? One way is through a carefully planned and structured orientation, training and support program.

The University of Maryland Faculty Training Program consists of seven components.

1. Welcome letter
2. Faculty handbook
3. Faculty dinner
4. Orientation session
5. Personal videotape of a class
6. Self-evaluation written instrument
7. Viewing of tape with Assistant to the Director
8. Copies of current articles on distance education

As soon as an instructor agrees to teach on television, he or she is sent a welcome letter, a faculty handbook, and an invitation to a dinner and a two-hour orientation. Experienced instructors are also invited to the dinner. A good meal is served and the evening starts with introductions. Veteran faculty who attend have been "primed" to share a few experiences; this inevitably brings out some humorous war stories and any tension generally dissolves in the laughter and joking that ensues.

After dinner, new instructors are invited to a classroom identical to the one in which they will be teaching, and are shown an 8-minute training tape called "ITV Nationals". It is light and amusing but covers the essential television skills. These skills have all been discussed in the faculty handbook, so for many instructors there is a reinforcement of familiar information. A discussion of the strengths and weaknesses of the instructors in the videotape follows the viewing. Finally, each instructor is invited to come to the front of the classroom and practice speaking into the microphone, directing the student camera operator, writing on the board with the special markers, and using the blue pad on the desk.

Once the instructor has been teaching for two or three weeks, he or she is scheduled to have the class recorded on videotape. A list of names and taping dates is distributed to instructors in advance so that a taping does not occur on a test or other inappropriate day. The tape is placed in the instructor's mailbox with a self-evaluation checklist (figure 1). The instructor can either watch the tape alone or watch it with the Assistant to the Director, who stresses that it will be viewed in a relaxed, non-judgmental atmosphere.

The last piece of the training program involves the occasional distribution of articles on distance teaching and distance education. For many instructors, this is their first exposure to distance or televised teaching and most of them enjoy seeing what is going on in the field.

Instructor Response to Training Program

The response to the training program has been very positive. 80 percent of all current faculty have attended orientations. While most faculty opt to view their personal tapes alone, the informal feedback to the ITV staff about the taping has been enthusiastic. For many instructors, the tape provides an opportunity to share their work with spouses, children and friends. One teacher this year reports that his tape on Data Structures consistently out-rates Mr. Rogers with his three-year old daughter.

Future plans for the faculty training program include the dissemination of a bibliography on distance and television education, and the development of a formal survey of faculty attitudes to television teaching. It is hoped that the latter will provide data to share in another professional conference.

Instructor's Self-Evaluation Checklist

	Yes	No
1. I speak clearly and audibly.	___	___
2. I repeat all students' questions.	___	___
3. I write in clear, black strokes on the board.	___	___
4. I use large, clear numbers and letters on blue pad.	___	___
5. I ask my TD to zoom in when necessary.	___	___
6. I avoid obstructing students' view of marker board.	___	___
7. I mention students' names whenever possible.	___	___
8. I announce in advance the points I plan to cover in a particular lecture.	___	___
9. I make effective use of overhead camera.	___	___
10. I ask TD to occasionally pan the on-campus class.	___	___
11. I begin and end on time.	___	___
12. I summarize the main points of my lecture with bulleted items on the character generator.	___	___
13. When appropriate, I use videotapes and other instructional media.	___	___

Figure 1. Instructor's Self-Evaluation Checklist

Bibliography

Chu, G.C. and W. Schramm. 1975. Learning From Television: What the Research Says. Washington, D.C.: National Association for Educational Broadcasting.

Davis, C. 1988. Teaching Adults Via Television: A Cognitive - Motivational Approach. In Proceedings of the Fifth Annual Conference on Non-Traditional Interdisciplinary Programs, George Mason University, Fairfax, VA.

Gibbons, J.F., W.R. Kincheloe and K.S. Down. 1977. Tutored Videotape Instruction: A New Use of Electronics Media in Education. Science 195: 1139-1146.

Nickens, S. 1990. Preparing English Teachers for the Instructional Television System. In Proceedings of the Sixteenth International Conference on Improving University Teaching, Yogyakarta, Indonesia.

Seigel, A. and C. Davis. 1989. Delivering Undergraduate Engineering Classes on Television: How Do Grades Compare? In Proceedings of Twelfth Annual Conference on Quality in Off-Campus Credit Programs, Kansas State University, Manhattan, KS.

POTENTIAL OF AUDIOGRAPHIC COMPUTERIZED TELELEARNING FOR DISTANCE EXTENSION EDUCATION

Satish Verma
James Land
Terrence Thomas
James Trott
Fritz McCameron

Distance Education

Distance education describes teaching-learning relationships in which the participants are geographically separated and communication between them is through such media as radio and television programs, audio and visual recordings, personal computer, teleconference, and correspondence texts. Typically, the learner is given the capacity to interact with the teacher or program directly, and given the opportunity to meet with the teacher on a periodic basis.

Distance education can bring educational opportunities to people who are geographically and financially disadvantaged, the physically handicapped, and those who wish to avoid particular learning dynamics or content, and protect their cultural lifestyle and mobility.

Major reasons cited for using distance education are to provide equity of educational opportunity, and to make up for the lack of conventional resources.

Audiographic Computerized Telelearning

In the last ten years, an approach to electronic distance education called audiographic computerized telelearning using standard telephone lines has come to the fore. It is much less costly to install, maintain and operate than the sophisticated one-way and two-way interactive video systems which require satellite communication and production facilities. It is obviously superior to the more rudimentary audio communication with one- or two-way radio or telephone, because it has both audio and graphics capabilities.

Satish Verma, Specialist and Coordinator (Program and Staff Development), Louisiana Cooperative Extension Service, and Professor of Extension Education, LSU, Baton Rouge, LA 70803
James R. Land, Head, Electronic Information Processing, Louisiana Cooperative Extension Service, LSU, Baton Rouge, LA 70803
Terrence Thomas, Dean, College of Agriculture, Jamaica
James W. Trott, Jr., Director, School of Vocational Education, LSU, Baton Rouge, LA 70803
Fritz A. McCameron, Dean, Division of Continuing Education, LSU, Baton Rouge, LA 70803

For the sake of convenience, the term "telelearning" will be used in this paper to refer to the audiographic computerized telelearning system. The paper will describe salient characteristics of the system, selected institutional experiences, research findings, and potential of the system to distance extension education.

Characteristics of Telelearning

Equipment

Essential operating equipment for a learning site consists of:

1. IBM personal computer XT or AT (or compatible)
2. Television monitor
3. Teleconference package
4. Speaker system

A scanner is needed to produce visuals from text and graphics, and a video camera to photograph slides or actual specimens.

The television monitor replaces the computer monitor for both production and presentation. A 19-inch or 25-inch color monitor is suitable. The size selected will depend on anticipated audience (class) size. The monitor is connected to the computer and should be capable of taking RGB input.

The teleconference package is commercially marketed by Optel Communications, Inc. It is called "Telewriter III". It is an audiographic, real-time, tablet-based, interactive writing system. The package contains a special modem which transmits both voice and data. The teacher is able to talk to students, and, at the same time, type to the computer screen (television monitor), draw graphics on the electronic pen-tablet, or present previously prepared visuals.

The speaker system is a standard portable teleconference station equipped with a speaker and four microphones.

Organization for Telelearning

Multiple sites in a presentation are linked by telephone. With just two sites, dial-up telephone lines are adequate. For three or more sites, a commercial bridge is used. Both voice and graphics are transmitted over a single telephone line. No time is lost since the two streams (voice and data) can function simultaneously. Furthermore, the system is fully interactive; concurrent two-way communication is possible among all sites. The electronic graphics pad can be used as an electronic chalkboard during presentations. Graphics can be stored on diskettes, and called up for display on the monitor just like a prepared set of overhead transparencies. With appropriate software, data can be imported from other software packages such as spreadsheets to develop a variety of graphic displays. Available graphics packages also permit the capture and use of still-frame video images by the computer, similar to the use of a slide projector. It is also possible to use a scanner to scan images from books, graphic material, etc. and grab the image into the telewriter program. The fidelity and quality of scanned images can be preserved to almost the original through a computer program developed specifically for this purpose[1].

All graphics can be used in real-time or prepared in advance and stored on diskettes for presentation at a later date. Generally, in order to minimize data transmission time, graphics are prepared in advance, stored on floppy disks, and distributed either on diskettes or by modem to each remote site in advance of a presentation. This enables the teacher to quickly call up the desired graphics screens during a presentation. Other appropriate data or graphics can be entered into the computer from the keyboard or graphics pad and simultaneously transmitted to each site during the presentation. Likewise, learners at each remote site can enter and transmit data to the teacher as well as other sites during the presentation.

Institutional Experiences

Harvard University and Boston University pioneered in using the OPTEL system for distance education in 1984 by teaching calculus in four area high schools. In the fall of 1987 these universities used the system to link up with Beijing University, China, for programs highlighting the latest developments in mathematics and biomedicine.

Louisiana State University is now the leading higher education institution in the United States in the use of this technology to teach classes to students in remote areas of the state. The first telelearning class (Social Work 5101, Maladaptive Processes) was taught during the fall semester of 1985 from the main campus in Baton Rouge to eight students at the LSU-Alexandria campus, 125 miles away. Since then, 31 telelearning classes have been taught with a total enrollment of 637 students. A variety of courses in Economics, Education, Communication Disorders, Library Science, Management, Marine Science, Special Education, and Vocational Education have been taught.

Learning sites, in addition to the Baton Rouge campus, have been established by the university in eight strategic locations to get statewide coverage. Maximum distance from any of these sites for a potential audience is about 50 miles. Five sites are managed by the LSU Division of Continuing Education and three have been set up by the Louisiana Cooperative Extension Service. In addition, the state's vocational-technical system has established three sites (expanding to 10 in 1989-90) for its training programs, and there is a high school network consisting of fourteen sites for reaching remote schools with enrichment programs. Potentially, therefore, educational programs can be made available to remote geographic locations in the state.

Telelearning Research

Because of the newness of the system, research on telelearning is limited. But the research supports the learning efficiency and effectiveness of the system, while raising interesting teaching-learning questions.

Maxcy and Maxcy[2] and Shaeffer and Roe[3] found that students rated telelearning significantly higher than classroom instruction in terms of overall impression, instructor pacing, organization and student participation. McMurry, Trott, Garrett and Lavigne[4] corroborated these findings. In addition, a majority of students in their vo-tech classes indicated that lack of the instructor's physical presence did not impede learning, that visuals were effective, and class interaction and cohesion was high.

Research on teleconferencing per se has yielded interesting findings which can be helpful to the design of distance education through telelearning. A few representative studies are reported. In a Kansas study it was found that preference for the system was greater among students who were older, lived in smaller sized communities, had to drive longer distances to learning sites, had previously participated in teleconferencing, and were placed in intermediate sized classes[5]. Davis[6] compared teleconferencing, face-to-face instruction and combinations of the two methods, and found that the all face-to-face group was much more positive toward the method of delivery than were the other three groups - all teleconference, face-to-face prior to teleconference, and teleconference followed by face-to-face. As face-to-face contact increased, the attitude responses of the participants improved. Although there was no significant difference in achievement scores, the all teleconference group obtained the highest score. Recommendations for successful teleconferencing have included humanizing the learning environment allowing for maximum participation by students, implementation of a presentation style which is conducive to learning, and feedback between student and instructor to insure learning.

In a recent study, Maxcy addresses the problem of "community of learning" raised by telelearning, and asks a fundamental question: Is it proper or right to emphasize the linguistic and graphic side of learning to the utter exclusion of visual cuing of the instructor[7]? Evaluating student and teacher comments about telelearning programs conducted at Louisiana State University, he concludes that the medium transforms the traditional variables in students by-and-large favoring telelearning because it enhances their learning, while instructors express reservations regarding the medium because they miss the classroom interpersonal dimension. Most importantly, he continues, the concept of community shifts from that of a face-to-face transactive teacher-student community to that of an interactive learner community. Telelearning seems to be hitting the mark here. In addition, there is a change in the sense of self emerging in telelearning. Students, in the absence of the teacher, appear to be developing closer personal relationships and a more focused view of the text (the audiographics presentation). Dialogue seems to be replacing didactive teaching. There is also an interesting change in teacher and student risk-taking. Since the students cannot see the instructor, it is difficult to "read" the real dialogical intent of the teacher. The text then becomes the focus without the visual "surround" or horizon of the physical self of the instructor. Students come to risk more with fellow students, thus building a tighter, more intimate student community. Instructors found enormous power over the substantive dimension of instruction. Since they are hidden from students, they can risk less than they might ordinarily in a more typical college classroom. The instructor can present only a minimal self, much like a telephone solicitor. As one student remarked, "I could not hear you smiling, so I did not know whether to laugh".

Telelearning in the Louisiana Cooperative Extension Service

The Louisiana Cooperative Extension Service (LCES), initiated a telelearning pilot in July 1988 to evaluate its potential for non-formal education. In the first year, five sites were established, software refinements made and training given to all faculty. The first educational program of inservice training for home economists was conducted in August 1989, and a second for 4-H Youth agents and leaders is planned for April 1990.

Evaluation of the Home Economics Inservice Telelearning Program

One hundred four home economists attended. The respondents rated the presenters' performance, and agreed or disagreed with or were undecided about sixteen positively phrased opinion statements.

Presenters were rated good to excellent by most respondents.

Table 1 gives the distribution of respondents agreeing, disagreeing or being undecided about learning effectiveness, visuals, site arrangements and interaction experienced in the program.

A majority of the respondents agreed that telelearning was more effective than just reading the material, but disagreed that it was better than self-instructional video or a live lecture. Apparently, though, nearly one-half of the respondents did not miss the presenter's physical presence.

Quality and clarity of visuals were appreciated by most respondents. They also agreed that visuals contributed to learning and were well-coordinated with the audio presentation.

Most respondents agreed that interaction generated during the presentation was good.

A comparison of the cost incurred in conducting the telelearning program with seven remote sites versus conducting the program live at these sites is shown below:

Telelearning Program

1.	Long-distance charges @ $30/site/hour for 4 hours	$1350.00
2.	Equipment depreciation (over 1000 presentations)	80.00
3.	Production of visuals (4 mandays)	400.00
	Total	$1830.00

Live Program (7 Sites)

1.	Travel to 7 sites @ 21c/mile	$ 350.00
2.	Meals and lodging for 3 distant sites (2 spec)	370.00
3.	Salary of 2 specialists for 7 days @ $130/day	1820.00
	Total	$2540.00

In this specific instance, the cost per participant was $18.30 by telelearning, and $25.50 by the conventional method of specialists travelling to the several sites to deliver the program.

Potential of Telelearning for Cooperative Extension

Although our experience with telelearning is limited we believe it has teaching potential in a state cooperative extension system. It is obvious that considerations and arrangements of organization and format will be different for non-formal educational programs with extension clientele as compared with formal course offerings with students. Some of these considerations and arrangements, as well as generic aspects, are discussed below:

Technology

The IBM XT or compatible model can only take double density floppy disks. This limits video or slide images to three per disk. A presentation with a number of such visuals would require many disks, which causes interruptions in the presentation for disk changes at the remote sites. This is not a problem with the IBM AT, because it takes high density disks.

Text and graphics can be scanned with a scanner and grabbed into the telewriter package. A computer program has been written by the LCES to convert the scanned image into a television screen picture. There is some loss in image quality, particularly color graphics, but the convenience of this conversion is an offsetting factor.

The size of the monitor will dictate audience size. Generally, a 19-inch monitor is suitable for a group of 15, while a 25-inch monitor is visible to about 25 persons. Larger groups can be accommodated using multiple monitors. However, interaction is sacrificed when the group exceeds 20-25 persons.

Data can be imported from other programs, such as dBase, Lotus, etc. to enhance presentations.

Production

It is important to produce quality images in a presentation. This requires forethought and planning on the part of the presenter and considerable lead production time. It may be necessary to dedicate special resources to production if volume of telelearning programs is high.

Logistics

A number of specific details have to be taken care of to have a successful program. Sites have to be arranged, site coordinators briefed and contacted well in advance of the program, disks and any supplementary educational materials have to be shipped to the sites, the format of the program has to be communicated, seating arrangements for ease of interaction, questioning, class atmosphere, etc. have to be made, and the possibility of combining telelearning with other techniques, such as video presentation at each site, panel/group discussions, have to be explored.

Topics

Telelearning is suitable for a variety of topics that lend themselves to visual representation and discussion.

Teachers

Specialists and agents need to become familiar with the operation of the system so that they can function independently during a presentation. More importantly, since they have to rely on audio communication, they should become skillful in the use of vocal, listening and interactive techniques. Some useful techniques include varying voice pitch and volume, clearly enunciating words, varying the rate of speaking, showing enthusiasm for the subject matter, summarizing, repeating, writing and inviting feedback. Listening techniques include keeping messages short and to the point, placing important concepts early in the presentation, giving participants a listening break every 15-20 minutes, inserting listening cues ("this is important"..."now, remember this"), and paraphrasing difficult questions.

Audience

Deciding the audiences for telelearning programs is critical. It would appear that at the beginning leaders should be the major audience of telelearning. They can multiply the learning effect several fold through their teaching efforts with their constituents. This would enable us to utilize resources more effectively. Later on, we can go directly to farmers and homemakers. With 4-H youth programs which are in the school system, it may be possible to organize telelearning programs for direct teaching.

Economics

The relatively lower cost of the inservice telelearning program was demonstrated. This will vary depending on audience coverage, number of sites, teaching resources involved, etc. Besides this direct saving, there are other economic benefits such as time saved by teachers (specialists) in travelling to multiple sites and using the time saved more productively. Other benefits include avoiding fatigue from travel and the time it takes to recover, the value of subject-matter information being made available simultaneously to audiences at the different sites. This may be particularly important during an emergency when information timing is critical.

Summary

Telelearning offers extension educators an opportunity to extend limited resources to cover a wide distribution of audiences in strategic geographic locations. It is a cost-effective system which optimizes existing computer facilities and creates a teaching-learning environment that is interactive, learning efficient and adaptable to a wide range of subject-matter. Prospective teachers (specialists and agents) can be easily trained in the technology and should readily adapt their teaching style to the medium.

References

1 Louisiana Cooperative Extension Service has developed the computer program. Details may be obtained from the author.

2 Maxcy, Doreen and Spencer J. Maxcy (1986). "Teleconferencing Strategies in Educational Foundations Teaching." Paper presentation, The Southern Futures Society Ninth Annual Conference, Fayetteville, Arkansas.

3 Shaeffer, J.M. and R.G. Roe (1985). "Effective teaching behaviors as perceived by students in a face-to-face and teleconferencing course" in Parker, L.A. and C.H. Olgren, Teleconferencing and electronic communications IV: Applications, technologies and human factors. Vol. IV. Madison, Wisconsin: Center for Interactive Programs, University of Wisconsin-Extension, 216-222.

4 McMurry, James G., James W. Trott, Gregory L. Garrett and F. Travis Lavigne, Jr. (1989). "Louisiana's Developing T & I Network." Paper presentation, Southeastern Trade and Industrial Education Conference, New Orleans, Louisiana.

5 Hilt, Robert S. (1986). Student Perceptions of Selected Demographic and Geographic Variables of the Kansas Telenet System. Ph.D. Dissertation, Kansas State University, Manhattan.

6 Davis, Delores J. (1984). Evaluation and Comparison of Teleconference Training with Face-to-Face Training and the Effects on Attitude and Learning. Ed.D. Dissertation, Drake University.

7 Maxcy, Spencer J. (1989). "Computer-Directed Learning and the Problem of Community", International Journal of Instructional Media, 16 (2), 127-135.

TABLE 1

PARTICIPANT OPINIONS OF HOME ECONOMICS TELELEARNING PROGRAM

Opinion Statement	Agree	Undecided	Disagree
General			
Did not miss presenter's presence	47	10	42
Subject matter was suited to telelearning	66	19	16
Learning Effectiveness of Telelearning			
Better than reading the material	58	15	27
Better than self-instructional video	29	29	42
Better than live lecture	19	25	56
Visuals			
Were appealing	70	10	20
Were clear and understandable	76	9	15
Had balance between text and illustrations	76	13	11
Contributed to learning	69	15	16
Visual and audio parts well coordinated	76	9	15
Site Arrangements			
Could see visuals well	74	6	20
Could hear presentation and comments well	78	5	17
Interaction			
Good at my site	83	12	5
Good with other sites	43	35	22
Good with presenter	73	18	9
Should be more interaction and participation by learner	72	17	11

ASSESSMENT OF PRIOR LEARNING AND PROGRAM ASSESSMENT

HONORS PROGRAMS AND PRIOR LEARNING ASSESSMENT: A NATURAL CONNECTION

Lois C. Ambash

Introduction

The needs, capabilities, and articulate demands of adult honors students can provide the impetus for a responsive environment which recognizes prior learning and integrates it within the context of the student's academic goals. Suffolk Community College is a case in point.

What began as SCC's Honors Office now also encompasses Adult Learner Academic Programs. In addition to administering the Honors Program and coordinating an ambitious faculty lecture series, this office coordinates a full range of nontraditional academic options geared to identifying and awarding credit for prior and experiential college-level learning.

It is significant that the prior learning assessment program resides squarely within the instructional apparatus of the College, reflecting the fundamentally academic nature of decisions involved in requesting and granting credit. In addition, adult students are frequently excellent candidates for prior learning assessment, while students who gain academic confidence through the portfolio preparation course may enroll in honors courses in subsequent semesters.

This dynamic interplay between an academically rigorous, liberal-arts-based program and the nontraditional prior learning assessment approach multiplies the options available to students.

Institutional Context

When Suffolk Community College - a three-campus, 21,000-student community college located in suburban Long Island, New York - designed its Honors Program in 1983, an evening study option for part-time students was added almost as an afterthought. The primary focus envisioned for the program was the traditional-age full-time student seeking to save money and/or to bolster prospects of transfer to a competitive four-year institution by succeeding in challenging lower-division coursework.

Lois C. Ambash, Assistant Dean, Honors and Adult Learner Academic Programs, Suffolk Community College, Selden, NY

The program design was hammered out by a college-wide committee graced with - or beset by, depending upon one's point of view - strong personalities, diverse academic disciplines, assorted placements on the spectrum between pragmatism and philosophy, and varied predilections toward filibuster. Added to this more or less typical recipe for an academic committee was the cumbersome governance structure of the college, requiring approval of three separate faculty senates and campus administrations.

The committee's deliberations and the larger discussions that followed were also marked by an academic conservatism peculiar to two-year colleges. Overcompensation for our lesser place within the academic pecking order was combined with the perennial friction between liberal arts and career programs, sciences and humanities. Discomfort with courses that cross accepted discipline boundaries and the prospect of interdisciplinary rather than "departmental" honors work were viewed by some with discomfort or suspicion, and every proposal was examined with a weather eye on the transfer practices of four-year institutions.

Further complicating the matter was the pejorative label of "elitism" attached to selective programs. A number of faculty and administrators questioned the suitability of an honors program to the mission of an open-admissions community college. Some declared flatly that our student body encompassed no students capable of honors work, while others (primarily in science and technical areas) claimed that their existing courses were more sophisticated and demanding than any interdisciplinary course under discussion. The prospect of including a specific math requirement within the program was ultimately defeated by those who argued that it would effectively block returning adults from enrollment in the program, whether through math anxiety or inability to progress beyond an elementary level.

The committee nevertheless agreed that several key elements needed to be incorporated in the program design: intellectual rigor; an integrated, interdisciplinary approach to the liberal arts; sufficient flexibility to serve qualified students regardless of curriculum and to be responsive to ongoing evaluation; adaptability to the varying needs and personalities of SCC's three campuses; transferability and articulation of honors courses; and practicality of implementation within constraints imposed by the institutional structure and the faculty collective bargaining agreement.

Program Structure

The resulting program requires students to complete a total of six honors courses, chosen to meet Honors Program and individual curriculum requirements simultaneously. Although not restricted to liberal arts students, the program centers on four interdisciplinary liberal arts courses: "The Philosophical Perspective," "The Aesthetic Experience," "The Social Science Perspective," and "The Natural Sciences" or "Mathematics/ Computer Science." These four-credit seminars are proposed by faculty within generic descriptions and differ from year to year and campus to campus.

The program also requires at least two additional honors courses, consisting of honors sections of standard courses, independent honors work, internships, or alternative versions of the core courses. Qualified students who choose not to complete the Honors Diploma Sequence may earn an Honors Recognition Certificate by completing fewer courses, or may enroll for selected courses of special interest.

Requirements for admission to the program include a B+ academic average; an ACT composite score of 24 or a combined SAT score of 1050; a satisfactory writing sample; a favorable letter of recommendation from a person in a position to comment on the student's academic potential; and/or alternative evidence of academic talent. This last, vague loophole has turned out to be the entry point for some of the program's most talented and interesting students, particularly returning adults.

Honors Courses

The ideal honors course envisioned within the program structure is marked by the following characteristics:

- use of primary sources
- emphasis on critical thinking and creative application of concepts to new situations
- seminar discussions requiring active participation of all students, and
- at least one major writing assignment requiring research and application of the literature of the discipline.

Core seminars, in addition, are to:

- emphasize the interrelationships among academic disciplines
- illuminate the similarities and differences in their respective modes of knowing, and
- provide a sense of historical perspective.

Class size is limited to 20 students.

Because honors courses are selected annually on the basis of faculty proposals, they offer faculty a unique opportunity to teach courses in areas normally treated superficially as part of other courses. The interdisciplinary emphasis has stimulated imaginative courses which have had a rejuvenating effect on individual faculty and on the entire curriculum. The following sampling reflects the creativity and breadth of core offerings, and suggests their impact on the academic environment:

- "American Dreams: The Social Scientist in Search of a National Ideal" brings together historical, anthropological, sociological, economic, and literary modes of thought together in an effort to delineate the American national character. The professor is a sociologist/anthropologist admired and respected throughout the college for his scholarship, optimistic attitude, and outstanding classroom teaching.

- "The Great Romance" covers the 19th Century Romantic movement in music, art and poetry. Taught by a creative and exuberant musician- cum-Renaissance man, the course has included an assignment to "do something Romantic" and explain what makes it so, as well as one requiring students to come to class in character as a composer, prepared to interact with fellow-"artists" based on previous research. The professor has been a prime mover in planning and initiating the revised Liberal Arts curriculum which has just been initiated throughout the college.

- "Long Island Marine Environment," taught by a biologist whose scientific background is augmented by a long-standing scholarly interest in shipwrecks. Geared specifically to non-science majors with limited math and science background, the course has been especially effective in broadening the world view of science-phobic adults. One student's major paper is to be adapted for inclusion in the professor's upcoming book.

- "The USA and Japan: A World Apart" takes a cross-cultural perspective on Japanese and American societies. Taught by an anthropologist noted for the rigorous scholarly research she demands of her students, the course has been adapted for permanent inclusion in the social science curriculum.

Lecture Series

To capitalize on the sense of intellectual community and professional revitalization created through these new courses, the Honors Program has for the past three years coordinated a lecture and book discussion series. Some two dozen faculty have presented a diverse array of common-hour programs, on topics ranging from boxing to The Satanic Verses, drawing as many as 100 listeners from faculty, students, and the community. For the last two years and anticipated for the future, the series is mounted in conjunction with the college's Faculty/Professional Development Committee. Presenters and audience alike have found the series rewarding, and it seems to have become a new college tradition. (Significantly, most of the students who have attended the lectures are returning adults, some of whom take time off from work to attend programs of particular interest to them.)

Honors Courses and Adult Learners

When the Honors Program was implemented in the fall of 1984, we were quickly disabused of our tacit expectation that most participants would be full-time day students of traditional college age. It became apparent at once that the program's greatest appeal was to the returning adult student, usually a woman, who flourished in the challenging and collaborative environment of interdisciplinary honors learning. Often admitted on the basis of "alternative evidence of academic talent" such as previous performance at SCC or significant written work, these students displayed highly developed verbal skills and extraordinary capacity for abstract reasoning, frequently accompanied by rusty or nonexistent mathematical skills.

Many were compulsively eager to perform well, but expressed their competitive urges by striving for high grades, rather than by competing with fellow students. As mature people and informed consumers, they consistently sought out individual conferences, advisement, and assistance from the Honors Office, services not well provided for elsewhere within the institution, and came to rely on the program director as "shredder-in-chief" of administrative red tape.

Day courses have been enhanced by the mix of traditional age and adult students, functioning as peers but bringing different perspectives to the material. Evening honors courses have been populated almost exclusively by mature adults. A marked intellectual and personal camaraderie - an ideal environment for collaborative learning - developed among students and faculty as the first cohort of evening students proceeded through the program.

Project ALTA

As a result, a proposal for a learning community for part-time evening students was presented to the National Collegiate Honors Council and was awarded a small grant, sufficient to encourage the college to fund the program for two years. Project ALTA (Adult Learning and Teaching Alliance) provided for a "Master Learner" to accompany the students over four evening core seminars, doing all assignments, serving as a role model, and also teaching a one-credit interdisciplinary course each semester emphasizing critical thinking and interdisciplinary connections.

The Master Learner, a professor of English with a strong undergraduate background in science, plunged into her role with enthusiasm and perceptiveness. She found that adopting the student role within her own institution provided new perspective on the power relationships between teacher and student, as well as between the student and the institutional structure. Since the specific subject matter of the core courses was outside of or tangential to her own discipline, she was able genuinely to wrestle with the material, while providing a role model for persistence, love of learning, and critical and analytic skills.

Both the Master Learner and the professors of the core courses were acutely aware, at first, of the psychological risk involved in their respective roles - the Master Learner, of being judged by a colleague-turned-"superior;" the core professors, of being judged by a colleague-turned-perpetual-observer. From the students' perspective, the Master Learner was more than a role model, "cheerleader," and collaborator in learning. She also served informally as an "ombudsman" between themselves and the administrative structure of the institution and tangibly represented the commitment of the institution to the returning adult.

Although funding for Project ALTA was not available after the termination of the grant, the experience heightened our awareness of the needs and characteristics of adult students, particularly parttime evening students. As a direct outgrowth of the needs, capabilities, and articulate demands of adult honors students, the College undertook to develop a more responsive environment which recognizes prior learning and integrates it within the context of the student's academic goals.

Recognizing Prior Learning

It had become evident through our extensive contact with adult honors students that many mature honors program participants had achieved significant and sophisticated prior learning through their business, social service, and other activities, and possessed the verbal skills to demonstrate such learning. Many of them had been motivated to return to school by divorce, family illness, or similar crises, or were seeking credentials to allow them to advance in established careers.

While Suffolk provided a nurturing intellectual climate for the returning students - treasured by most faculty for their interest and diligence - the College lacked a fully developed program of nontraditional options for adults. Although the college had a stated policy of awarding credit on the basis of CLEP and Regents College Examinations, the exams had never been offered on campus and policies surrounding the exams had not been reviewed in many years. No mechanism was in place for assessing nonsponsored learning or noncollegiate courses for published evaluations did not exist.

Once students had taken advantage of the few unpaid internships and limited telecourses available or had perhaps submitted scores for CLEP exams taken at other institutions, it was necessary to send them elsewhere for a more flexible array of possibilities, often at the expense of Suffolk's convenience, low cost, and teaching-centered approach.

In addition, available staffing precluded (and continues to preclude) adequate academic advisement for part-time students, who often chose their courses without fully understanding how they might fit into an Associate's degree or a longer-range academic goal. Evening and weekend services for adults were notably lacking. These problems were exacerbated by the personal pressures confronting many adults, including demanding jobs, child care and other family responsibilities. These obligations were frequently accompanied by financial pressures, family illnesses, marital difficulties, and/or single parenthood.

In 1986, the program director was accepted for participation in the professional development program of the National Institute for Leadership Development (co-sponsored by the American Association of Community and Junior Colleges and the League for Innovation in the Community College). In association with that program and with the support of the college's Vice President for Academic Affairs, she set out systematically to develop and implement a more flexible and responsive set of academic options for adults.

The specific anecdotal evidence and student comments that had emerged and continued to emerge from adult honors students and graduates proved consistently valuable in this process, both as guides to program planning and as evidence for the need to expand services.

The assistance and encouragement provided by both CAEL (the Council for Adult and Experiential Learning) and the College Board were particularly critical during the planning process. Having learned first-hand that "a prophet is not without honor save in his own country," we found it especially helpful to invite CAEL and College Board personnel to the college in support of our efforts. The professional development activities and publications offered by both organizations have proved invaluable, both on a practical and a "political" point of view. It has also been important to document the more progressive efforts of our neighboring institutions in the area of prior learning assessment, as evidence that students seeking such recognition have numerous local options available if we fail to address their needs.

Combining Honors and Prior Learning Assessment

Over the past three years, what was once the Honors Office has come to encompass a broad range of Adult Learner Academic Programs. In addition to administering the Honors Program and coordinating an ambitious faculty lecture series, the office now has these additional responsibilities:

- The program director (now Assistant Dean) is the college's CLEP Testing center administrator. We provide clerical and academic support for the testing program, disseminate information to students and college staff, and conduct individual and group advisement sessions for students considering CLEP. The only new professional staff allocated to the program is a twelve-hour-per-week assistant funded under a VEA grant.

- The Assistant Dean chairs and provides administrative support for the college's Advisory Committee on Prior, Experiential, and Nontraditional Learning (the "PEN Committee"). This college-wide group is responsible for overseeing the expanded prior learning assessment program to insure high academic standards and consistency across campuses.

- The office provides professional development and staff support for a credit-bearing course in "Academic Planning and Portfolio Preparation," required of all students who intend to submit prior learning portfolios. These responsibilities include screening of students, coordination of the assessment process, and training of faculty assessors.

- The office, in conjunction with the PEN Committee, reviews existing transfer credit policies governing credit by examination and noncollegiate coursework, initiates generic evaluations of noncollegiate training, and maintains internal links with the college's own growing programs of cooperative education, telecourse study, adult-oriented student activities, and career counseling.

- We have begun working to facilitate transfer of prior learning credits earned toward the Associate's degree. Our goal is to seek modifications in existing joint admissions and articulation agreements with neighboring four-year institutions which would recognize prior learning evaluations conducted at SCC.

Why the Link?

The placement of the prior learning assessment program squarely within the instructional administrative and policy-making apparatus of the institution - as opposed to the student personnel counseling arena - emphasizes the fundamentally academic nature of the decisions involved in preparing students to make appropriate credit requests and to integrate them within their curriculums. Moreover, a significant minority of adult students referred to the honors program on the basis of placement test scores turn out to be excellent candidates for prior learning assessment. Students who first become aware of their academic potential during the Academic Planning course enroll in honors courses for the subsequent semester.

Such dynamic interplay between an academically rigorous liberal-arts-based program and the nontraditional prior learning assessment approach multiplies the options available to the student. It also works to dispel unjust and erroneous characterizations of prior learning assessment as "the easy way out."

A great deal of "missionary" work remains to be done within the college to achieve the full academic respectability our prior learning assessment process deserves. We have created a highly structured process that includes student screening, rigorous portfolio requirements, course-based credit awards, and requirements that assessors be both qualified in the discipline and trained in prior learning assessment techniques.

Like the Honors Program, however, the nontraditional nature of the process is initially viewed askance by many faculty. As each aspect of the process has been submitted for governance consideration, we have had to demonstrate repeatedly that the process is both academically legitimate and not threatening to enrollment.

Navigating the shoals of the governance structure is often a daunting task. However, the academic and personal benefits we foresee for our many returning adults make the task both important and rewarding.

ADVANTAGES OF DIVERSITY IN THE ASSESSMENT OF EXPERIENTIAL LEARNING

Richard M. Ashbrook
Pamela D. Knight
Brian F. Wallace
Gary L. Smith

Introduction

The practice of awarding academic credit for experiential learning has become an accepted variant of contemporary educational practice. The basis for this practice rests on the recognition that learning occurs in a variety of non-academic settings. When this learning is equivalent to higher education outcomes, the award of credit seems both justified and well-deserved. Nonetheless, a sometimes haunting question remains: How can educators be certain these educational outcomes have been achieved by the non-traditional learner?

This question has been pursued by the Capital University Adult Degree Program since the inception of its non-traditional degree plan. For more than a decade, Capital University has awarded credit to students who can demonstrate their prior learning is equivalent to college-level learning. During this time, the method through which prior learning is assessed has undergone a series of refinements. This paper reports on those refinements, emphasizing recent modifications which have assured a more valid and reliable practice.

The evaluation of experiential learning outcomes calls for a diversity of assessment methods. Single discipline and single method evaluations of learning outcomes are deficient because: (1) single discipline assessors may bias outcome decisions by focusing on idiosyncratic instructor-specific expectations; and (2) single method evaluations, such as the commonly used narrative/portfolio technique, is biased in favor of students whose strength is in written communication. This paper addresses these two problems by describing innovations in the evaluation of experiential learning outcomes developed at Capital University.

Richard M. Ashbrook, Ph.D., Director of Assessment & Assistant Professor of Psychology, Capital University, 2199 E. Main Street, Columbus, OH 43209
Pamela D. Knight, M.A., Advisor, Capital University, 1320 Sumner court, Cleveland, Oh 44115
Brian F. Wallace, Ph.D., Associate Professor of Political Science/Advisor, Capital University, 2199 E. Main Street, Columbus, OH 43209
Gary L. Smith, Ph.D., Associate Dean of Adult Education, Capital University, 2199 E. Main Street, Columbus, OH 43209

The potential bias of single discipline assessors is overcome by a panel decision-making process. Decisions about the award of credit are always made by a panel of faculty and external assessors. Members of the panel represent a cross-section of academic disciplines. The problem of single method evaluations is overcome by offering students the opportunity to: (1) identify relevant content areas of their learning; (2) match instructional content areas with different methods of competency demonstration; (3) report past instructional history from non-university-based education; (4) document examination records from on-the-job training and certification programs; and (5) provide work samples and other learning products which attest to competency.

About Capital University

Before explaining Capital's prior learning assessment procedures, it may helpful to explain the context of this work by briefly describing the institution and its students. Chartered in 1850, Capital University is a 3,000 student private institution with three undergraduate colleges (Arts & Sciences, Music Conservatory, & Nursing) and a Graduate School of Administration and a School of Law. The Adult Degree Program offers mid-career and nontraditional students educational opportunity at the main campus in Columbus, Ohio and at branch campuses in Dayton and Cleveland. The full-time equivalent undergraduate student/faculty ratio is 11.7 to 1. Liberal arts has always been central to a Capital education, and this commitment has recently been revitalized with adoption of a new competency-based liberal arts core curriculum. A hallmark of this new core curriculum is its use of assessment methods initially pioneered in the Adult Degree Program to assure competency in essential areas for all Capital graduates.

The Adult Degree Program students represent a diverse mixture of interests and life experiences. While difficult to typify, many of these students are returning to higher education after a several year absence. The majority transfer course work from other institutions in which their education was begun. Often their education was discontinued because of economic necessities to enter the work force. Now they find themselves at mid-career with a new necessity to attain their baccalaureate for promotion or career advancement.

Assessment of Experiential Learning

Helping Students Evaluate Their Learning

All students at Capital, even traditional undergraduates, are eligible to receive credit toward their degree if they can demonstrate college-level learning from life experiences. Two optional courses are offered to prepare students for taking advantage of credit for prior learning. One of these courses is a college re-entry course designed to give students a chance to self-assess their academic readiness in basic curriculum areas. Both the returning student and the adult first-time learner find this general orientation to academia helpful. It is here that students begin to evaluate whether their life experiences have equaled college-level learning.

The next step for most students is enrollment in the Portfolio Development Course. Portfolio is the name given to the package of materials a student submits to support their request for credit. Thus, the purpose of this course is to teach students how to evaluate their life learning and how to prepare the materials which eventually will be assessed. For instance, students complete assignments that help them review their life experiences for signs of college-level learning outcomes. One of these assignments asks students to construct a time line, or chronolog, of their life activities. Particular attention is given to life events that required students to develop new areas of skill or knowledge. Examples of life events identified by students are: beginning a new job, opening a small business, becoming a volunteer, pursuing a new hobby, or attending workshops and corporate-sponsored training programs. A next step is for students to articulate in general terms the learning that occurred in response to these life events. This information is then transferred onto a worksheet where students can record the types of learning experiences they have had and the time and context in which their learning took place.

Identifying Course Models and Content Areas

To receive credit for experiential learning, students must demonstrate that they have achieved college-level knowledge or skills. To this end, students begin to browse college catalogues to match their learning experiences to course descriptions. A course model from any regionally accredited college or university is the standard against which a student's experiential learning is evaluated. At the same time, students prepare a Degree Goal Statement with the guidance of their academic advisors. This goal statement forces students to articulate the objectives of their education by planning future course work and selecting a major or area of concentration. This two-fold process is aimed at helping students identify prior learning that is both college level and relevant to their degree goals.

Course descriptions in college catalogues generally do not convey too much about the content of a course. As a result, students begin a more detailed investigation into the specific content areas covered in a particular course. A Course Model Information Form guides students through the relevant questions, such as identifying the department in which a course was offered, the prerequisites, the number of semester hours, and the accrediting agency. Next, the student must set forth the content areas of this course. Many resources are used to delineate the content areas. For instance, course syllabi are examined for areas covered. Course textbooks might be reviewed for topic headings, tables of contents, or chapter outlines. Professors are sometimes interviewed to explain the scope of the course.

Specifying the content areas serves two purposes. One, the student can self-assess whether their experiential learning really matches the content of the course. Two, these content areas become the organization for demonstrating the student's competency. Eventually, the student completes a Course Content Outline Form. This form lists the content areas, the relevant experiences that led to mastery of an area, and a brief description of how a student will demonstrate their competency. This form is then reviewed by an assessment specialist and feedback is offered to the student. For instance, if some major content areas are obviously lacking, this would be conveyed to the student. Similarly, other methods of demonstration might be suggested to the student. An abbreviated example is shown below:

Course Model Outline Form		
Course: Public Administration		
Content Area	Relevant Experiences	Method of Demonstration
Bureaucratic Politics	Assist. City Manager (1973-1976)	Narrative on politics in a bureaucracy
Government Budgeting	Prepared 3 city budget	Sample budget with explanation Letter from Manager describing my budget responsibilities
Administrative Leadership	Attended workshop on leadership styles	Certificate of attendance & instructional history form
Collective Bargaining	Participated in coll. bargaining Read books on topic	Newspaper article verifying my role Annotated bibliography

Demonstrating Competency

Notice the last column on the Course Model Outline Form. This column describes how a student will demonstrate their competency in a specific content area. Multiple methods of demonstrating competency are available to students. This is essential since reliance on any single method would likely be a less valid measure of a student's knowledge or skills. There are a few reasons why multiple methods can be expected to produce more valid decisions about a student's competency. Results from different methods, especially when used in combination with one another, can converge on the student's level of competency. In effect, multiple methods can corroborate one another. Another benefit of this approach is that the method of demonstrating competency can be matched to the subject area. For instance, assessing Conversational German by evaluating a lengthy essay will likely be less reliable than observing an audio or video tape of the student engaged in conversation using the foreign language. Still another advantage of this approach is that students can choose ways to demonstrate competency that are congruent with their strengths. Take the case of a student who has superior numerical reasoning ability but relatively poor verbal expression skills. If the method of demonstrating competency is restricted to procedures that rely heavily on verbal expression, such as writing narratives, then an assessment of this student's competency may underestimate his or her level of knowledge or skill. As an extreme, imagine trying to assess algebra and trigonometry by an essay. Of course, a more direct, and valid, approach would be to ask the student to complete a sample of problems or demonstrate that they use algebra and trigonometry in their work.

To guide students through different methods of demonstrating competency, a manual explaining how to develop a portfolio is given to each student. The manual gives suggestions on matching these methods to a student's life experiences and learning outcomes. In addition, several forms have been developed to gather information in a standardized format. The advantage here is that the finished product is more easily assessed, since information is always found in the same place. Plus, the forms help students build their case for competency by asking them relevant questions.

Some of the methods available to students are:

(1) The Narrative - Students are given general instructions on how to organize their narratives. For instance, they indicate the activities and learning resources that they used to become competent in a content area. Next, they describe some key knowledge areas, skills, or principles that they have learned. In this section, the student needs to demonstrate both a breadth of familiarity with the key topics and a depth of understanding in critical components of the content area. In the final section, a student conveys how they have applied or integrated their learning.

(2) Instructional History - Often students' learning has been fostered in non-accredited educational programs. Examples of these are non-credit college courses, continuing education, company-sponsored seminars and training programs, workshops, lecture series, or correspondence courses. The quality of instruction in these type programs varies quite a bit, presenting a special problem for the assessment of learning outcomes. A structured format, called the Instructional History Form, was developed to record students' experience with these type programs. An example of an abbreviated form is shown below.

Instructional History Form

What is the title or name of the course of study?

Enter the dates instruction began and ended.

What was the situational context of the instruction?
__ non-accredited college course
__ non-credit college course
__ continuing education program
__ workshop/conference/seminar
__ lecture series
__ correspondence course
__ military-sponsored course
__ other ____________________

Enter the name of the sponsoring institution, agency, or company.

Enter the names and qualifications of the instructor(s).

Enter the number of hours you spent in the following activities related to the course of instruction and relevant to your competency request.
__ listening to lectures, speakers, etc.
__ participating in classroom activities, other than lectures.
__ reading books or other printed materials.
__ preparing assignments, homework, course projects, etc.
__ other, specify ____

Enter the author, title, publisher, and date of publication of printed materials (e.g., textbooks, workbooks, study guides) you read as part of the instruction.

(3) Examination History - If a course of instruction included examinations, then there is also a structured format for reporting the results of examinations and the context in which exams were given. This method of demonstrating competency is also useful in two other conditions. Nationally standardized examinations which are not recognized as transfer credit by Capital University are reported here, along with faculty-developed examinations for assessing competency in some academic areas.

(4) Licensure and Certification Record - Another way of demonstrating competency is through proof of licensure or certification. Again, a structured reporting format is utilized, which is especially helpful for certificates or licenses which are not familiar to assessors. An example here might be the license to practice real estate. The structured reporting format would convey the eligibility requirements and the issuing authority or agency.

(5) Annotated Bibliography - In circumstances where learning is obtained through extensive reading, students are encouraged to develop an annotated bibliography. Similar in some ways to the narrative, the annotated bibliography calls for a personal reaction to the learning materials, rather than simply a book or article review.

(6) Work/Product/Performance Samples - Adult learners, unlike most traditional students, have had many opportunities to put their learning into action. Recognizing this, the assessment procedures permit students to assemble documentation of their learning outcomes using a variety of media. These might include, but are not limited to, samples of a student's work, products they might have developed or produced, and performance demonstrations of skill, craft, talent, or technique. A few examples here might be helpful. For instance, a student demonstrating competency in Business Communications might submit business letters they have written which illustrate use of different styles and formats, or a research report they prepared showing use of research methods and referencing. Similarly, a student seeking credit for computer programming might submit source code and annotate this with explanations of different programing rules and functions. This format is not at all limited to the printed medium. In fact, the university television studio is becoming a valuable student resource for developing performance samples. A student wishing to demonstrate competency in a speech class will sometimes prepare and make a speech on videotape, attaching to it some self-critique to bring out important content principles, then submit the finished product to the assessors.

Assessing Learning Outcomes

Decisions about the award of credit for experiential learning are always made by a panel of university faculty, often with the input of designated specialists in curriculum areas. The panel approach is used to assure the integrity of experiential learning credit. The process preserves academic integrity by involving university-wide faculty, not just adult educators. Panel members are appointed for a fixed term of service. Thus, there is always rotation of panel members so the composition of the panel is constantly changing. Each student's competency request is carefully reviewed by at least seven faculty, one of which has expert knowledge in the academic area of the course model. Sometimes circumstances arise where expertise cannot be found on the panel. In these cases, other university faculty are brought into the assessment process. When expertise cannot be found on campus, external assessors are asked to give their opinion to the assessment panel. External assessors include faculty from other colleges and universities, and recognized local experts in business, industry, government, social services, or the arts.

Panel members read students' competency requests, or portfolios, in preparation for a monthly panel meeting. Reviewing a portfolio is no easy task; an hour can be easily spent on a single course competency request.

After reviewing the materials, the panel member makes written comments and independently recommends the number of credit hours that should be awarded to the student. At the monthly panel meetings, each member's independent recommendations and comments are published to the rest of the assessors. Each student's competency request is then raised for discussion. It is at this point that the real advantage of a panel process can be seen. There is always discussion and disputation. The principles that guide the award of credit for experiential learning are repeatedly called into question, clarified, and modified. The student's portfolio might be passed back and forth as panel members debate whether competency in each of the content areas has been shown. Finally, when all the opinions have been set out, a vote is taken on the number of credit hours to be awarded to the student.

Those unfamiliar with evaluating experiential learning in this manner might wonder what contribution can be made by a faculty member evaluating a student's competency outside their area of expertise. Say for instance, what might an English professor contribute to the assessment of a student's competence in Sociology? The answer is more than you might think. For one, it is surprising how often independent raters from different disciplines agree on the number of credits that should be awarded. In measurement terms, we might say we have achieved a high inter-rater reliability - a finding that attests to the integrity of a panel approach. For another, the integrity of this process does not merely rest in the extent to which there is agreement; the disagreements are a built in system of checks and balances. Single discipline assessors, even within their area of expertise, may bias outcome decisions by focusing on idiosyncratic instructor-specific expectations. Thus, the designated specialist who is most familiar with the content areas of a student's request is held accountable by their faculty peers. Ultimately, the student is served by this process. They can be assured of a fair and objective evaluation of their learning.

Once the panel has reached a decision about the number of credits that should be awarded, this information is conveyed to the student. Accompanying this feedback is a short critique of the portfolio, explaining the rationale for the panel's decision. The student then has an opportunity to resubmit their materials one more time to the panel. This gives the student a chance to clarify any materials that the panel might have found confusing or address a new area raised in the course of the panel's review of the competency request. This resubmission is handled the same way as the original one. Panel members review any changes, independently arrive at a recommendation for additional credit, debate the issues, then vote for the credits that should be awarded.

Concluding Remarks On A Broader Context

The evaluation of experiential learning, especially when it is pursued by the methods described above, raise some important questions for higher education in general. We ask our students to prove their learning by identifying critical content areas in a course and then by demonstrating their competency. This implies that higher education has already taken the necessary first step. That is, higher education must already have articulated their instructional intents and expected outcomes. Indeed, the process we rely on demands that this kind of specification of intents and outcomes be done at the level of the individual course, not just at the programmatic or institutional level. Only fairly recently has higher education been called upon to articulate objectives in such a measurable way. Recent conferences, such as those sponsored by F.I.P.S.E. at the A.A.H.E. Assessment Forum or the University of Tennessee - Knoxville Assessment Center, mark the current status of higher education's assessment efforts. The emphasis is finally on outcomes! In the spirit of this conference, we might simply conclude that the non-traditional student has always taken learning seriously; now, we must also take it seriously.

2-YEAR AND 4-YEAR COLLEGE COOPERATIVE VENTURE: SHARING PORTFOLIO PREPARATION AND EVALUATION

Sandra Blakeman
Jacqueline Johnson
Andrea Smith

Introduction

Adults preparing themselves to remain competitive and be employable in a rapidly changing job market are being forced to return to the college classroom. When they do return, they bring with them an array of learning that often equates to that gained in the college classroom. They face time and financial constraints as well as the prospect of repeating learning they have gained through their professional or life experience. Assessment of prior learning, including portfolio assessment and credit by examination, is essential to help the adult enter or return to college at an appropriate level.

The assessment of prior college-level learning through portfolio for undergraduate credit is not available at every Maryland institution. Many institutions do not offer assessment programs due to financial or political constraints. In Fall 1989 Charles County Community College (CCCC), which did not have an existing portfolio assessment program, and The University of Maryland University College (UMUC), entered into a unique cooperative venture to provide, on an experimental basis, a portfolio development process which would assess prior learning of both CCCC and UMUC students. The agreement was to offer a section of the UMUC portfolio development course, EXCL 301, on site at Charles County Community College with the option for students to be evaluated by faculty at either institution, depending on the nature of the learning documented and the potential for use of credit in the students' curricula.

The experiment was successful. Portfolios have been received and are currently being reviewed. Plans are underway for a joint marketing effort to continue this pilot program in Fall 1990.

Sandra Blakeman, Coordinator of Prior Learning Assessment Network, Prince George's Community College, Largo, Maryland 20772
Jacqueline Johnson, Coordinator of Prior Learning, The University of Maryland University College, University Boulevard at Adelphi Road, College Park, Maryland 20742-1664
Andrea Smith, Dean, Career and Technical Education, Charles County Community College, P.O. Box 910, La Plata, Maryland 20646-0910

The Development of a Pilot Program

Description of Participating Institutions

- Charles County Community College

Charles County Community College, La Plata, Maryland, is one of only two institutions of higher learning serving the three rural counties of Southern Maryland, 45 miles south of Washington, D.C.. Over 5,000 credit students attend each semester at nine different sites in the 1,100 square mile area. The average age of the student is 29 and 80% are part-time students, employed full-time. This typical community college population takes 5-6 years to complete an A.A. degree. Many students come with rich learning from experience that often duplicates learning in traditional college courses. Prior to Fall 1989 the only option for a student was to earn credit for this non-traditional learning through standardized testing programs and departmental exams. With input from the Council for Adult and Experiential Learning (CAEL) and the founding of the Experiential Learning Assessment Network (ELAN), a network of assessment professionals from Maryland, the District of Columbia, Pennsylvania and Virginia, the college began to consider options for portfolio assessment.

- The University of Maryland University College

The University of Maryland University College (UMUC), College Park, Maryland, is the continuing education campus of The University of Maryland System, with the primary mission of serving adult students. It is one of the 11 institutions that make up The University of Maryland System and enrolls the largest number of students. It offers master's and bachelor's degree programs, scheduling its programs in the evenings and on weekends to accommodate the adult student. Non-credit professional development programs are also offered through the University.

University College has three geographic divisions. Statewide Programs serves students at College Park at more than 20 off-campus locations, one of which is Waldorf, Maryland, near the CCCC campus. The European and Asian Divisions serve the U.S. military at more than 260 locations in Europe, the United Kingdom, the Middle East, southeast Asia and the Pacific. The University also offers a Nuclear Science Program, a bachelor's degree program offered at a number of utilities throughout the country.

University College offers assessment opportunities both through credit by examination and the EXCEL through Experiential Learning program.

Description of the EXCEL Program

The EXCEL through Experiential Learning program, in existence since 1978, is the oldest portfolio assessment program of its kind in the State of Maryland. Students must apply to the program and, if selected, must enroll in the 3-credit portfolio development course, EXCL 301 Learning Analysis and Planning. The course is offered in several locations in

Maryland. The eligibility requirements for EXCEL are:

- At least nine credits of college coursework.
- A minimum cumulative grade point average of 2.5 in the most recent college coursework.
- No more than seventy-five credits earned toward the bachelor's degree.
- Learning from work and life experience that can be evaluated by University of Maryland evaluators and that does not duplicate college credit already earned.
- Demonstrated ability to write well.
- A tentative evaluation of the credits already earned and how they fit a UMUC degree plan.
- A complete application submitted at least two months before the beginning of the semester in which a student hopes to participate.

Completed portfolios are submitted to appropriate faculty for the award of credit. Student learning is evaluated in some 17 academic disciplines. EXCEL students earn an average of 15 credits each semester through the program, in addition to three credits for the portfolio development course. Credits awarded through EXCEL are treated as transfer credits since the learning was not gained at UMUC.

College students in Maryland can earn up to a total of 30 credits toward their undergraduate degree through portfolio assessment, at the community college or the university, as regulated by the Maryland Higher Education Commission. The EXCEL program, like other Maryland portfolio assessment programs, helps students earn credit for their non-collegiate learning, hopefully keeping them from repeating learning, moving them into courses that will provide new learning, recognizing them for the learning they have gained and saving them valuable time and money.

Students who complete the EXCEL program tend to do extremely well in courses taken after EXCL 301, with a "B" average or better.

Structuring the Pilot Program

In Fall 1988 the EXCEL coordinator provided a half-day faculty development workshop on portfolio assessment to all CCCC full-time faculty. A portfolio assessment faculty committee at CCCC was then formed to develop guidelines for portfolio assessment. That committee recommended that UMUC be invited to provide the EXCEL portfolio course in Southern Maryland to both 2-year and 4-year students in Fall 1989. Community college faculty would then evaluate portfolios appropriate to the community college curriculum; UMUC faculty would evaluate portfolios appropriate to University programs.

A written agreement was developed defining responsibilities of each institution. While structuring the program, CCCC developed policy statements meeting state and regional accrediting requirements. Joint marketing was initiated and representatives of both institutions facilitated several student orientations. The CCCC students who participated were selected jointly by CCCC and UMUC administrators. Selection of the first instructor of the course was critical, requiring someone familiar with the needs of the community college student, the adult learner, transfer programs, and portfolio development.

Teaching the Pilot Portfolio Development Course

Challenges exist for the instructor of the portfolio development course with students describing learning for two distinct institutions. Knowledge of the curricula, degree requirements, and administrative procedures from both institutions is essential in order to guide students. Instructors must maintain frequent contact with administrators from both institutions.

For students the most important concept in the combination class is the difference in the development of the description of the learning, referred to as the narrative. Two year schools typically require a description of learning on a course-by-course basis for ease of credit transferability to a 4-year institution. Four-year schools more typically require a narrative developed by discipline, rather than one based on specific courses.

Degree requirements for the two separate institutions must be made clear to the students who may seek credit in an area that a 4-year institution will not accept if their goal is to transfer.

Obstacles

Inter-institutional coordination of program development, multiple admissions requirements, orientations, marketing, tracking applications, fee collection, and selection of students all posed challenges in this pilot program. This requires a great deal of time and patience.

One particular area of concern for students is the different fee structure for each institution. One solution has been to develop an information sheet clearly stating the two fee structures.

Another obstacle is the selection of an appropriate instructor for the pilot course. It is critical that the instructor be an experienced portfolio instructor, understand the adult learner, and understand the differences between the community college and university curricula.

The faculty committee could also be an obstacle in this process if they chose not to endorse the project. Without their support the project would be impossible.

In another geographic area the presence of a competing four-year institution might preclude the development of the program altogether.

Benefits

Benefits of the cooperative venture to adult students living in Southern Maryland are as follows:

- It enables a student to attend an institution offering portfolio assessment at a more convenient location.
- It allows the community college student to earn both lower and upper division credit through the same preparation process.
- Students are encouraged to articulate their degree with a four-year institution at a much earlier stage.
- Students are provided with an incentive to return to college to complete a two-year degree.
- Students may enter or reenter a degree program at an appropriate level.

Benefits to the community college are as follows:

- The community college can offer portfolio assessment without a lengthy development phase.
- Resources required to initiate a new program are reduced.
- The risk associated with the initiation of a new program is reduced.
- The pool of adult learners is increased.
- Communication and articulation between the participating institutions is increased.

Benefits to the university are as follows:

- The enrollments in the portfolio course are increased, increasing the likelihood that the section will not be closed.
- The university is marketed to community college participants.
- The university is provided an extra class location that may be utilized by students at no additional expense.
- Communication is increased between the community college and the university regarding articulation difficulties for the community college student.

Results

In Fall 1989 10 students enrolled in the pilot program, 3 who wrote predominantly for community college credit and the remaining 7 who wrote for university credit. Portfolios are in the process of being evaluated at this time.

Orientations are now scheduled for the Fall 1990 semester. A site has been chosen for the next UMUC portfolio development course in Southern Maryland. In Summer 1990 a full evaluation of the pilot program will be completed.

Resources

We would recommend that one contact the following organizations if they would like more information regarding prior learning assessment programs and literature.

The Council for Adult and Experiential Learning (CAEL)
223 West Jackson
Suite 510
Chicago, Illinois 60606
(312) 922-5909

The Experiential Learning Assessment Network (ELAN)
c/o Dennis Faber, President
Dundalk Community College
7200 Sollers Point Road
Dundalk, Maryland 21111-4692
(301) 285-9869

THE WORK AUTOBIOGRAPHY AS A MEANS OF ASSESSING EXPERIENTIAL LEARNING

Deanna H. Bowman

Introduction

The Regis College course, Career Management, contains information on careers and assignments designed to help the student identify salable skills. A written assignment in this course is the "Work Autobiography". This assignment expresses the student's total work history in narrative form with a cumulating paragraph describing the next job the student wants to obtain. The work autobiography illuminates the student's growth and development in the work world. Generally, the narrative is chronological beginning with the first job and progressing to the present. There are indications that the "Work Autobiography" is a good predictor of success in school and at work. The analysis of the "Work Autobiography" by an adult learning specialist provides an initial list of areas of college level knowledge acquired by the student. Secondly, the student meets with the adult learning specialist to discuss work experience, college creditable areas, credit needed, and nontraditional methods of gaining credit. Granting credit to an adult student for college level knowledge obtain through work allows the student to attend classes at the level of his/her expertise, increasing knowledge gained through formal education, and minimizing the cost of the formal education. This granting of credit for college level knowledge may also contribute to the satisfaction level of the college student and hence to success in college.

The Student

Regis College in Colorado Springs is an appropriate setting for this study. Our programs are now eleven years old, about half of our students work in the computer science field. The vast majority (90 +%) of the adult students at Regis College are gainfully employed in professional or technical jobs. Most of them are returning to school to update skills or to obtain a degree which will increase their security within their companies. The fact that the Regis adult students are gainfully employed eliminates several of the variables contaminating other studies, career indecisiveness (Lunneborg 1975), learning style (Kolb), and motivation. Because the percentage of adults attending college is increasing steadily, questions regarding their academic success and unique characteristics should be addressed now.

Bowman, Deanna H., Adult Learning Specialist, Regis College,
2330 Robinson Street,Colorado Springs, CO 80904

Creation of the Work Autobiography

Both the new and returning adult students are similar to traditional college students in confusion about careers, college majors, and college in general. To alleviate the stress associated with the first meeting of the class, Career Management, they are requested to draw a picture of their work history, past, present, and future. This picture is used as the basis of the assignment which follows 4 weeks later, the narrative work autobiography. The picture is also used as an ice breaker, "explain the picture to your neighbor", as the outline for the work autobiography, "begin your writing by explaining the picture", and as the basis for creation of a targeted resume. Between the creation of the picture and narrative work autobiography, the students engage in self study exercises, career research, and testing. The tests used are The Myers-Briggs Type Indicator by Isabel Briggs Myers, the Strong Vocational Interest Inventory, and the Learning Style Inventory by David Kolb. The tests and the self discovery exercises stimulate work and career examination.

One of the most important learning exercises between the creation of the picture and the narrative work autobiography is the teaching of the Experiential Learning Model of David Kolb. Students take the Learning Style Inventory and are given instruction in the Kolb Model. Without this understanding of the Kolb Model as the basis of the presentation of the work autobiography their understanding of the importance of their past work on their future work and potential is limited as is their knowledge of how to communicate the work experiences to a professional in writing. The use of the Kolb model in writing contributes to better understanding by the learning specialist of the experiences that contributed to the college level knowledge of the student. The Kolb model suggests that knowledge is obtained as a result of direct experience, reflection on the experience, generalizations concerning the experience, and the testing or application of the experience in new situations. The use of the Kolb model as the basis for writing the narrative work autobiography is explained. Some students immediately understand all aspects of the model, others need this new experience with the Kolb model simplified when attempting to write. These students are directed to incorporate the Kolb in their writing by explaining what they did, what they learned from what they did, and how they applied or are applying the knowledge gained. We suggest that if the students prefer facts and concrete experiences they will be most comfortable writing when they outline first, while if they prefer generalizations and abstract concepts they will likely feel comfortable beginning with the story and adding the facts later. Facts, learnings, and applications are all needed for the adult learning specialist to effectively interpret and analyze the work autobiography and discuss with the student indicated areas of college level knowledge.

Equating Knowledge to College Credit

One final factor in the transformation of college level knowledge into college credit is the identification and labeling of that knowledge. When an adult student has worked for years how does the learning specialist decide the specific areas of expertise and the amount of credit that each student has obtained? College course descriptions are used as labels or yardsticks, for knowledge gained. This makes use of the years of expertise of academe in evaluating knowledge, and separating it into credit areas. What better way to evaluate knowledge or learning than to compare the areas of work to college course descriptions in any college's catalog? This evaluation as to credit areas and amounts is useful to the students in the work place. As a result of the evaluation they have an understanding of skill level; beginning, average, or expert. Again, this knowledge of level of expertise allows the student to better sell him/herself in the work place. The work autobiography is the initial means of conveying the student's knowledge to the adult learning specialist. We have found that learning to successfully convey this information to the evaluator also enables the student to more effectively communicate this knowledge of his/her skill in the work environment. Students become better able to sell themselves.

Excerpts from Work Autobiographies

Ken had helped his father run a butcher shop. His father died when he was seven and he took various odd jobs until he was out of high school. He learned about installment buying when he purchased his first bike for a paper route. He then had jobs as a stock boy and gas station attendant. Finally, while a senior in high school he was hired as trainee at a radio station. He obtained his FCC license, and worked until he left for college. With the help of his brother he obtained a full time job in broadcasting at the age of nineteen. "The work consisted of being on the air for two hours and monitoring an automated program for the remaining six hours." He moved to another radio station reading the news. "The station rose to the top of the ratings very quickly". He was fired for nonconformity to the dress code, in radio no less. He moved to another radio station in another state as morning man and program director. One more job in radio and he left to become a partner with his brother in a bar. Nine years later the bar was destroyed by fire and he entered his third career. He obtained a job as a reporter, working for ten months before deciding that he was geographically mislocated. He went to the city of his choice and obtained a reporters job in eight weeks. Keeping his job a few months he began free lancing, an activity in which he is still engaged. Lastly, he obtained the job of editor of a specialty newspaper. "The job requires me to wear many different hats. I design and sell ads. I write and edit stories, take photos, do the layouts, and send out bills".

Initial review of Ken's work experience indicated that he might have college level knowledge in the courses; Managing a Small Business, Business and Technical Report Writing, Newspaper Layout, Writing for the Media, News

Editing and Copy Reading, Advertising, Consumer Behavior, Introduction to Radio and Television, Radio and Television Production, and Advanced Public Speaking. He is in the process of writing a portfolio and testing to obtain the thirty hours of credit defined by these courses.

Annie had filled secretarial positions in three large companies. Her fourth job was as Release Coordinator, for engineering design documentation, with a computer company. "Use of my organizational, order administration, and interpersonal skills significantly reduced design release cycles and related costs. I learned of wiring techniques, electronic theories, chemical processes and office automation utilizing computer products. I progressed rapidly and was promoted to an exempt administrative position. As an administrator I was responsible for departmental expenses and capital budgets. I developed salary plans and wrote performance appraisals for five years...." Annie likely has college level knowledge in management and human resources. She states, "While my communication, interpersonal, administrative, leadership and management skills are strong, I have been advised to further develop my technical skills." She is pursuing a double major in Business Administration and Computer Information Systems. She is not interested in gaining credit for her secretarial skills because she does not want to sell them in the work world nor will they contribute to her degree requirements. She is requesting 15 hours of credit for college level knowledge in Management, Business Data Processing, Speech Communication, Technical Writing, and Performance Appraisals.

Sally had modeled for two years when she obtained a position as Litho Layout Engineer with a greeting card company. "I checked printing and registration for paper products,and trained and supervised new employees." She was promoted to Packaging Design as an artist. "I learned to produce keyline and paste-up." Promoted to Book Designer she designed page layouts, did spec type and mathematically determined the typesetting length for manuscripts. She directed production, and met tight deadlines. Moved to Sale Promotion and Advertising. "I learned about advertising photography, styling group product shots, color separations and press proofing. I presented catalogue design concepts to upper management and learned the subtle negotiating skills needed to persuade..." She became one of the first female line designers at a major greeting card company, staying in this position for five years. Next, she opened her own graphic design business in a new geographic location. After fours years she moved again this time working in public relations. Two years and one move later she joined another greeting card firm. "I introduced new stocks, special processes and color envelopes. I figured extensive budgets for staff, supplies, and 400 designs. I interviewed and hired on several levels." Her position was eliminated and she began free lancing. Desiring more security, she affiliated with a large paper product company. She creates their mail order catalogs and determines the products that they will sell. "I create sales promotion strategies, direct the artists, coordinate designs with engineers, and research new product ideas." Her work autobiography was initially evaluated as indicating credit in; Women and the Business Organization, Graphic Design I and II, Management, Managing a Small Business, Time Management, Interviewing Techniques, Production Planning and Design, for a total of 24 hours of credit.

Jim's work autobiography began prior to his first job. "When I was eight years old my father left a successful business position to re-enter school at a theological seminary." Jim spent most of his early life in church or participating in church sponsored activities. He entered college, choosing to major in fishery Biology. He hated the science courses and enjoyed the business courses. He dropped out of school and took a job as a ranch hand in Wyoming. After two months he was fired for lack of effort and progress, a surprise to him. "I determined that never again would I give someone the opportunity to say that I had not given my best effort and gone above and beyond what was required of me." Moving, he was hired by a chemical production firm, and promoted to production foreman. "I learned the basics in production management, employee motivation, and developed skills in interpersonal interaction and management of daily workloads." Moving four years later he purchased acreage, developed and resold the land. At the same time he began working as a letter carrier, serving as the local union president, negotiating the labor agreements. He entered the postal service management training program and was promoted to manager. "I have learned management principles and applied them in the areas of human resources, time and workload scheduling and settlement of disputes. I write technical reports and manage safety on a daily basis." He is presently with the postal service, ten years later. At the time he entered college he transferred 44 hours from previous college attendance. He obtained college level credit in the following areas; Technical and Report Writing, Conflict Management, Management, Principles of Real Estate, Family Finance, Biblical Themes, Time Management, Motivation, Interpersonal Speaking, Production Management, and Performance Appraisal, a total of 33 hours of credit. He graduated in two years and is now four years later considering another career change.

Conclusion

The work autobiography is an excellent tool in the evaluation of college level knowledge (learning) gained through work experience. It provides structure and possibilities for verbal discussion of amount of knowledge gained through work experience. It is often the first comprehensive picture the student creates of his/her past work history. These understandings of work history can contribute to better understanding of future potential and the paths to take to reach full work potential.

References

Biberman, Gerald, and Buchanan, James (1986). Learning Style and Study Skills Differences across Business and Other Academic Majors. Journal of Education for Business, April, 303-307.

Brady, E. Michael and Fowler, Mary L. (1988). Participation Motives and Learning Outcomes among Older Learners. Educational Gerontology, (14), 45-56.

Elson, James, and Pollio, Howard, R. (1985). A Multidimensional Approach to the Definition of College Students' Learning Styles. Journal of College Student Personnel, Vol 26 (5), 434-443.

Gordon, Virginia N., Coscarelli, William C., and Sears, Susan J. (1986). Comparative Assessments of Individual Differences in Learning and Career Decision Making. Journal of College Student Personnel, May, 233-242.

Highhouse, Scott and Doverspike, Dennis (1987). The Validity of the Learning Style Inventory 1985 as a Predictor of Cognitive Style and Occupational Preference. Educational and Psychological Measurement, (47) 749-753.

Knowles, Malcolm S. (1980). The Modern Practice of Adult Education, Follett Publishing Co., Chicago.

Kolb, David A. (1976). Learning Style Inventory: Technical manual. McBer, Boston.

Lunneborg, P.W. (1975). Interest Differentiation in High School and Vocational Indecision in College. Journal of Vocational Behavior, (7), 297-303.

Miller, C. Dean, Alway, Margaret, and McKinley, Donna L. (1987). Effects of Learning Styles and Strategies on Academic Success. Sept.

Sugarman, Leonie (1985). Kolb's Model of Experiential Learning: Touchstone for Trainers, Students, Counselors, and Clients. Journal of Counseling and Development. Dec. Vol.64, 264-268.

Tinto, V. 1975, Dropout from Higher Education: A Theoretical Synthesis of Recent Research. Review of Educational Research, (45), 89-125.

Veres, John G. III (1987). The Reliability and Classification Stability of The Learning Style Inventory in Corporate Settings. Educational and Psychological Measurement, (47), 1127-1133.

ASSESSING EXPERIENTIAL LEARNING OF ADULTS IN UNDERGRADUATE PROGRAMS

Walter Czarnec

Introduction

The following model for evaluating experiential learning for a nontraditional undergraduate program is employed in the Liberal Studies Program of Graduate and Continuing Education at Framingham State College. The model is based upon three initial determinations: learning has taken place, the learning was intentional and the learning was of a sufficient quality and quantity to justify the awarding of credit. These three conditions must be established, prior to the assessment of each experience to be evaluated.

Life experiences are then categorized by the context of the experience. The categories we have identified are: Employment, Community Service, Independent Study, Correspondence, Military, Technology, Travel, Noncredit, and transfer. Each experience must be placed in one of these categories and fully documented according to specified guidelines. The resulting packet of information is called a portfolio and is the document used by the faculty to assess experiential learning of the student.

The assessment of experiential learning is conducted in two phases, by four faculty members employing a written set of guidelines for each of the categories. Each faculty member is provided with a copy of the portfolio and independently, assesses each experience. In the second phase, the faculty members and the candidate come together in order that the candidate may clarify or amplify those areas a particular assessor may feel are unclear.

Following this assessment, the team conferences to determine the amount of credit to be awarded, by category, for the experiences and the academic area into which that credit is to be placed. The areas identified are humanities, Social Science, Natural Science, mathematics and Electives. The candidate is then informed of the results and each member of the assessment team makes recommendations to the candidate as to how the remaining program requirements may be met. The four faculty assessors are now the advisors to the student for the remainder of the student's stay in the program.

Dr. Walter Czarnec, Framingham State College, 100 State Street, Framingham, Massachusetts 01701

Program

The Liberal Studies Program is intended for the mature adult learner that has had significant life experiences. The program has the unique feature of awarding college credit for those life experiences deemed worthy. It is a recognition of the fact that collegiate level learning can take place outside the academic institution. The program has many traditional features. Students must accumulate 128 credits for graduation These credits must be distributed into five core areas in order to maintain the liberal studies nature of the program. The areas and their minimum credit requirements are: Humanities - 24, Social Sciences - 24, Natural Sciences - 20, Mathematics - 8 and 52 credits in Electives. The residency requirement of 32 credits is equivalent to the traditional residency requirement of one academic year. As part of the residency requirement, a student must take a minimum of one course in each of the academic core areas, regardless of the credits received at the assessment of their life experiences. Since many of the students are returning to school after an absence of many years, the program has a communications skills requirement. In assessing the candidate's life experiences, the committee will also seek to determine if the candidate possesses the necessary written and oral skills to do collegiate work. The committee may recommend course work to correct any deficiencies. The Commonwealth of Massachusetts requires that all graduates from public institutions of higher education have a course involving the state and federal constitutions.

Admissions

Individuals interested in the Liberal Studies Program are required to complete an application form in which they, briefly, identify by category those experiences for which they are seeking credit. The application must also include proof of completion of secondary education and official transcripts of all collegiate courses completed. These materials provide the admissions committee data upon which questions are formulated to ask the applicant at the admission interview. The interview is conducted by three faculty members. Their responsibility is to determine if the candidate is appropriate for the program and the program is appropriate for the goals of the applicant. The committee seeks to determine the maturity of the applicant and if the life experience identified are worthy of consideration The committee also attempts to establish whether the program is appropriate for the goals the candidate has for seeking a degree. Those applicants meeting the Bachelor of Liberal Studies degree. Their next task is to complete the portfolio of their life experiences.

Training Sessions

As part to the packet the candidate receives upon official acceptance into the program, the portfolio form is the most important. This is the document that will be used to assess the candidates life experiences and will become part of the permanent file. To help the candidate in the preparation of this portfolio, two training sessions are provided. The first session is intended to provide the candidate with sufficient information and guidance to properly complete the portfolio. Each category is thoroughly defined and illustrated so that the candidate can properly place the life experiences. Proper documentation for each category is also illustrated and explained. Experiences, which can not be documented, are not included in the portfolio. Acceptable documentation contains three characteristics: it must ensure the candidate has had the experience identified, it must clearly delineate the content of the experience and it must identify the length of time spent in the experience. Specific documentation will vary with the experience and category.

The second session, which occurs approximately six weeks after the first, provides the candidate with an official opportunity to meet with a faculty member to answer questions which may have arisen concerning the portfolio. Candidates may have difficulty with properly placing an experience in a category or are unsure as to whether the documentation they have given is sufficient. The session also includes an explanation of the assessment process which will occur after the completed document has been submitted and reviewed by the Graduate and Continuing Office.

Portfolio

Each category within the portfolio contains a format unique to that category, and each experience in that category must be placed on a separate page. The category of Employment will require that the candidate identify the name of the company in which he/she was employed, the official name of each position held within the company, a complete job description for each of the positions and the dates of employment with that company. Part-time experiences are also included. Following each life experience, so described, will be the proper documentation supplied by the place of employment, verifying all the information provided. It is the candidates responsibility to provide the necessary documentation. Questionable documentation may require further verification. A similar approach is employed in all other categories.

The completed portfolio is submitted for review to verify that all life experiences have been properly identified, categorized and documented. All deficiencies must be corrected before a date is set for the formal assessment of the candidate and the life experiences.

Assessment

An assessment committee is constituted upon the receipt of a completed portfolio that has been reviewed and corrected. The committee consists of four faculty members, each representing one of the core areas identified earlier. The faculty are selected according to the life experiences the candidate has identified. A candidate seeking credit for travel experience may require a member of the Geography department as the Social Science assessor. On rare occasions it has been necessary to seek expert help outside the faculty because of a particular life experience.

Each member of the committee is provided with a copy of the portfolio in advance of the formal assessment with the candidate. This is to allow the faculty member the opportunity to preassess all experiences, employing a written set of guidelines that were created at the inception of the program. These guidelines, titled The Confidential Guidelines, identify the criteria established for the evaluation of each life experience category and suggest the credit assignment for experiences in that category. This assessment is done independently by each faculty member.

At the formal assessment, the committee meets to compare their respective assessments and to determine those categories that they can come to consensus on for the credits to be awarded. These categories usually possess very thorough documentation and require no amplification or clarification. The committee then identifies those categories and experiences which may need to be investigated with candidate. The candidate is then invited to meet with the committee. The chairperson explains what has transpired and what is about to occur. Although the setting appears formidable for the candidate, all reasonable steps are taken to make the candidate as comfortable as possible. They have been previously appraised of the assessment process and have met most of the faculty under other circumstances. The tone of the assessment is kept informal, with all participants seated around a table in comfortable chairs. Coffee is offered and all questions and comments are in a conversational and non-challenging manner. The candidate is reminded that the purpose of the assessment is to award credits for those life experiences meeting specified guidelines and that it is the committee's responsibility to make the necessary judgements. The chairperson also reiterates that the committee must determine if learning has taken place and is of a sufficient quality and quantity to award collegiate credit. Since theses committee members will become the candidates advisors for the remainder of the candidate's stay in the program, they are advocates for the candidate in this assessment process.

As a general rule, it is the categories of Independent Study and Travel which require amplification and clarification. Documentation for these experiences does not identify what learning may have taken place. Therefore, the responsibility is placed upon the committee to establish if theses experiences are credit worthy. The questions seek to identify the area of the learning, the quality or depth of that learning and the quantity. In the Travel category, the portfolio will identify the location of the travel and the possible itinerary followed. The committee will try to determine if the candidate has learned about the governmental structure of the location visited, the geography of the region, the customs and culture of the people, the language and the various kinds of information that an individual might acquire, if they had taken a semesters course to learn of the country they had visited.

The category of Independent Study is approached in a similar fashion. This category refers to those learning experiences that the candidate has created on his/her own. It can be described as self-teaching. Questions are intended to identify the depth of the knowledge and its extent. Often, the committee will award credits for the category rather than specific experiences in that category. This occurs when the various experiences, taken individually, are not of a sufficient quantity to compare to a traditional course length but, if taken together, will be of a reasonable length. Credits are awarded for fractional parts of a course.

Each category in the portfolio has a maximum number of allowable credits. This is intended to preserve the liberal studies concept of the program. Large amounts of credits for a particular category would narrow, not broaden the candidate as the program intends. The credit maximum, by category, is: Employment - 18, Community Service - 9, Independent Study - 16, Correspondence - , Military - , Technology - , Travel - , and Noncredit - 20.

At the conclusion of the assessment process, with the candidate, the committee confers privately to reach a final consensus of the credits to be awarded by category and the placement of the credits by core area. The candidate is then recalled and informed of the committee's assessment. The committee members now assume their new roles of advisors, and each member makes a recommendation to the candidate as to the manner in which the candidate may complete the remaining requirements in the particular core area of the advisor. The candidate is also informed that the assessment of life experiences may continue while the candidate is in the program. The candidate is advised to confer periodically with the advisors so that they may offer help, encouragement and direction. The candidate receives an official copy of the assessment.

Core Area Discussion

At the conclusion of the acquisition of all the credits in a particular core area, each candidate participates in a Core Area Discussion (CAD). The candidate meets with the particular advisor of that core area to establish the topic and nature of the discussion. The candidate then researches the topic and prepares a thirty minute presentation to be given before the advisor and two other faculty members representing the particular core area. The presentation serves as a basis for a discussion which follow. The purpose of the experience is to enable the candidate to research a topic of interest which will require the assimilation of the knowledge gained in the particular area through course work and life experiences, and articulate it in a conversational manner in the discussion with the faculty. A typical topic for the CAD in mathematics is to discuss the impact of mathematicians on the philosophies of Materialism, Mechanism and Determinism. When the candidate has completed all four CADs, the program is complete and the candidate is ready for graduation.

A MULTIPLE SURVEY APPROACH TO STUDENT OUTCOMES ASSESSMENT

Leslie Overmyer Day
James F. Sanford

Introduction

As the number of non-traditional students and educational programs has grown in recent years, quality assessment of nontraditional programs has become an important educational issue. Strategies for conducting such assessments often focus on the evaluation of students' prior learning, but rarely consider the multiple outcomes of the non-traditional educational experience (Resnick and Goulden, 1987; Rinnander, 1977). Those assessments which do concentrate on outcomes generally emphasize academic achievement.

The present student assessment was based on a plan developed to assess the Bachelor of Individualized Study (BIS) program at George Mason University. The assessment plan was described in a previous paper (Overmyer Day & Sanford, 1989). It includes a multiple method approach for evaluating various aspects of student outcomes, including general knowledge, knowledge specific to areas of study and satisfaction/personal growth. Overmyer Day and Sanford (1989) presented a comprehensive description of the assessment plan and its grounding in previous research.

The present paper focuses on the satisfaction/personal growth element, as this area was considered primary in importance to the overall research goals for the BIS program. This area is also lacking in precedent, as most outcomes assessment research has focused on criteria such as GPA, graduation rates and graduate school admissions (Dorsey and Pierson, 1988).

Student satisfaction and personal growth have been examined from the standpoint of academic, professional, personal and social goals. The focus on these four areas and the use of multiple surveys to identify and evaluate the attainment of these goals is designed to provide information about personal experiences of students and to identify the strengths and weaknesses of the nontraditional degree program. A number of information-gathering sources and instruments are involved. The plan includes entry surveys for new students to identify their proposed academic, professional,

---

Leslie E. Overmyer Day, Graduate Research Assistant, Department of Psychology, George Mason University, 4400 University Drive, Fairfax, VA 22030
James F. Sanford, Assistant Dean for Individualized Study Programs, School of Continuing and Alternative Learning, George Mason University, 4400 University Drive, Fairfax, VA 22030

personal and social goals, exit surveys for graduates to evaluate their goal attainment, case studies to provide information concerning ongoing dynamics of the educational experience, and possible small group discussions to compare student perceptions at the end of their programs. The focus of the present paper details the initial implementation, initial results, and revision of surveys targeting the newly admitted students and the most recent graduates.

The Initial Surveys

Two initial surveys, comprised of several open-ended questions which directly targeted academic, professional, personal and social goals, were administered to (a) recently admitted students and (b) students about to graduate. Students were asked to describe their goals in each area and to either evaluate the extent of support received from the BIS program (for those about to graduate) or to anticipate the support available from the BIS program (for those just entering). Both surveys also included questions about general reasons for attending college and for choosing BIS. The items addressing goals contained examples of possible responses designed to aid students' ability to respond in an appropriate manner.

Initial Survey Results and Discussion

The initial surveys were administered to 41 students about to graduate in May 1989 and to 36 students entering BIS in the fall 1989 semester, providing two data sets. Response rates of 41 percent (n=17) for the graduates and 97 percent (n=35) for the new students were obtained.

Two cluster analyses were conducted on the data provided from the new students. A between-variables average-linkage clustering of squared Euclidean distances was computed as a validation of the survey instrument. The same procedure was conducted between-students to note similarities among individuals on particular characteristics. At the sixteenth level of analysis a number of distinct clusters appeared.

The between-variables cluster analysis revealed that students tended to answer items pertaining to personal and social goals in terms of academic or professional aspirations. This was indicated by the clustering of these survey questions, denoting the similarity in underlying characteristics. In other words, students merely reiterated their academic and professional goals, such as "earn a degree" or "get a promotion" as personal or social aspirations. Those few students who gave responses appropriate to the request, generally restated one or more of the examples provided in the survey item itself. This required no real thought on the students' part and provided no meaningful insight regarding individual goals. As a result, items directly addressing personal and social goals were eliminated from subsequent surveys. Specific examples of responses were also removed to promote more active thought and avoid prompting the students with "acceptable" replies.

The between-subjects cluster analysis was intended to provide information regarding similarities among individuals on particular characteristics which could then be used to draw profiles of "typical" BIS students. Interpretation of these results was also conducted at the sixteenth level of analysis.

Overall, the findings indicate that the students fail to form any distinct groups, but remained as unique individuals. This indicates that the sample was fairly heterogeneous in its combination of responses. This also suggests that no single combination of characteristics describes the "typical" BIS student.

Cluster analysis was attempted on the exit survey data set, but the number of cases was insufficient to successfully execute this technique. However, visual inspection of the data revealed consistency between the two data sets in their lack of identification of purely social or personal goals. Therefore, items directly addressing these two goal areas were subsequently eliminated from the revised exit survey as well.

Revised Surveys

Upon completion of data analysis and interpretation of preliminary survey efforts, changes were made in the content of the questionnaires. Although the results indicated that students failed to provide useful information about their personal and social goals, this type of information was still important to the overall research goal of assessing students on multiple levels. Reasons for lack of data on social and personal goals were thought due to extensive family, career and social obligations among this group, leaving little time or desire to develop personal and social goals in the academic environment.

In order to uncover information about students' social and personal lives, a more indirect method was developed. A number of demographic measures were added to provide data concerning time demands and extent of social involvement outside the university environment. The revised surveys contained more descriptive information, such as age, gender, current occupation, number of hours worked per week, household size and number of organizational involvements. This type of information provided a richer data base for compiling student profiles and was considered an appropriate indicator of non-academic obligations. It was reasoned that factors such as family, church, political and professional involvements present a drain on the individual's available time and energy, thus decreasing the chances of seeking social and personal stimulation from the academic experience.

Revised Survey Results and Discussion

Revised exit surveys were administered to 30 students graduating in January 1990. Twenty-four (24) completed surveys were received, for a response rate of 80 percent.

Frequency Distribution

The first satisfaction/personal growth item in the January, 1990 revised survey concerned reasons for attending college. The frequency of students' responses to this item is provided in table 1. Nearly all individuals (96 percent) discussed academic and/or professional goals as critical outcomes of their BIS experience. Only one person indicated personal goals as the reason for her or his BIS participation, and no one included only social goals. Thirteen individuals (54 percent) included personal and/or social goals in addition to professional and academic goals. These students generally stated a personal outcome, such as sense of accomplishment, as a secondary outcome of attaining a degree. No one stated personal or social goals as primary over professional or academic goals.

TABLE 1

Why Attending College

	Frequency	Percent
personal	1	4.2
academic	4	16.7
professional	3	12.5
academic and personal	3	12.5
professional and personal	8	33.3
professional and academic	3	12.5
professional and social	1	4.2
personal, academic, professional and social	1	4.2

When asked why they selected the BIS program, the majority (50 percent) stated that no traditional major was available in their specific area of interest. Others chose the BIS program for its liberal credit acceptance, flexibility and shorter time required to complete their degree requirements.

Questions addressing students' academic goals indicated that for most (96 percent), their goals did not change while in the BIS program. Half the sample (50 percent) said their academic goal was to obtain a degree, while 33 percent saw education as preparation for a profession, and 8 percent sought to broaden their knowledge in a specific area. The remaining 8 percent had more than one of these goals.

Questions targeting professional goals indicated that 83 percent maintained their original goals throughout their programs. Half the respondents (50 percent) planned to seek advancement within the same company or field in which they were presently employed. Professional goals of others included plans to enter a new field (38 percent) or continue with their education in graduate or professional school (8 percent). One person was unsure about professional goals.

Most graduates felt that the BIS program had assisted them in achieving their goals (96 percent), and one person was unsure. When asked if they planned to seek further formal education beyond the BIS degree, 79 percent said they did, 17 percent said it was possible, but they had not yet decided, and only one person (4 percent) had no plans to continue.

Descriptive Data

Descriptive data were obtained for this sample from the demographic measures included in the revised survey. These measures provided information concerning students' personal, professional, social and academic lives.

Personal: The sample of January 1990 graduates ranged in age from 27-53 and varied widely within this range. Females comprised 71 percent of the sample, while males represented 29 percent. The majority of students were married (58 percent), and most had at least one child (71 percent). Most students (75 percent) lived with at least one other person, either spouse, child or house-mate.

Professional: The number of years BIS students have worked full-time varied from 1 to 33 years and, as with age, had no distinct mode. Fourteen (58 percent) of the students had worked at least one year part-time since graduating from high school. Three students (12 percent) indicated they were not currently working, 5 students (21 percent) were working part-time, and 16 (67 percent) were working between 40 and 64 hours per week. Of those 16 full-time workers, nine individuals (38 percent) indicated that they worked in excess of 45 hours per week.

Social: The majority of students (83 percent) were actively involved in at least one organization (i.e. religious, political, professional and leisure), and most of these individuals (65 percent) participated in two or three activities.

Academic: All students within this sample attended at least one school other than George Mason, and 67 percent attended two or more institutions prior to entering the BIS program. The faculty advisors chosen by these students represented 16 different departments within the university.

Cluster Analysis

Cluster analysis was conducted on responses to the satisfaction/personal growth measures for this data set, specifying between-students average-linkage of squared Euclidean distances. Interpretation was conducted at the twelfth level of analysis.

The cluster analysis revealed that 3 distinct groups of students had formed, containing either 3 or 4 individuals each. Two pairings had formed, while the remaining students failed to connect with other individuals.

The first cluster to form contained three individuals who were in perfect agreement on seven of the eight satisfaction/personal growth measures. They represented a group who attended college for personal and professional reasons, experienced no change in their educational or professional goals while in BIS, and saw the academic experience as a preparation for advancement within the same field or company. These individuals felt the BIS program had assisted them in reaching their goals, and they all planned to continue with some type of advanced education or training. The demographic information indicated that these individuals represented a mix in terms of age, gender, marital status and areas of academic and professional interest.

The second distinct cluster was composed of four individuals sharing responses on five of the eight survey items. This group reflected students who chose BIS because no traditional major was appropriate for them and they experienced no change in their various academic and professional aspirations while completing their program of study. These group members also felt that the BIS program had assisted them and they all planned to seek further formal education or training. Closer examination of demographic information again revealed few commonalities among these individuals in terms of age, marital status, fields of interest, etc.

The final cluster contained four members in agreement on four of the eight measures. They represented students who chose BIS for its liberal acceptance of credit and its flexibility. Their educational goal of achieving a bachelor's degree remained unchanged throughout their BIS experience. This group also felt that the BIS program had allowed them to achieve their goals. Examination of the demographic characteristics of this group, as with the others, showed few other commonalities among its members.

Further Analysis

The lack of shared demographic characteristics within the three clusters was explored further by performing a subsequent cluster analysis on the satisfaction/personal items and many of the demographic measures. Items such as age, sex, marital status, number of children, number of household members, years worked full- and part-time, hours worked per week, and number of organizational involvements were included in the analysis to determine if any unexpected relationships were remaining undetected.

Interpretation was conducted at the twelfth level of analysis and revealed that a very large group of ten individuals had formed. Closer examination of these individuals indicated that both demographic characteristics and satisfaction measures were diverse, and that commonalities which produced the cluster appeared trivial in nature. These results provided further evidence that BIS students represent a broad variety of interests, goals and backgrounds, reducing the ability to describe the "typical" BIS student in demographic terms.

Discussion

The information provided from both the preliminary and revised surveys demonstrates the strong tendency for BIS students to pursue higher education for almost exclusively academic and professional reasons.

The data support the hypothesis guiding the revised surveys that these students as a group have extensive obligations in a number of areas outside the academic environment. The lack of clearly defined personal and social goals among all groups surveyed and the extent of involvement in non-academic activities revealed by demographic measures provides further support for the notion that BIS students view their education in terms of academic and professional outcomes. The two shared goals of academic and professional pursuits among the majority of BIS students appear to be the only commonalities among the students as a group, as indicated by the diversity of their demographic characteristics.

This emphasis on professional and academic outcomes of education supports the assertion of Simosko and Associates (1988) that adults today need to complete degrees for upward mobility in their work. This differs from Carp, Peterson and Roelfs' (1974) survey of adult learners who found adults interested in more vocational or self-improvement courses than in traditional academics. Many of the BIS students viewed the educational experiences as "self-improving" (a personal goal), but only as a secondary outcome of attaining their academic or professional goals. This suggests a shift in learning goals has taken place during the past decade, perhaps as adults without a college degree find it more difficult to compete in the job market.

The clustering of certain individuals around professional and academic goals suggests that the BIS program attracts a wide variety of individuals, in terms of age, life style, and academic interests, who share basic desires to achieve a non-traditional degree and pursue a specialized career path. They view the BIS program as a vehicle for achieving their goals in these areas and don't seek direct gratification of personal and social needs from their academic pursuits. The majority of BIS graduates within this sample feel that the BIS program aided them in achieving the goals they set for themselves.

The results of this research effort have direct implications for those providing student support. While traditional 18-22 year old students have employed college as a major socializing, as well as educating experience, the non-traditional adult student appears to require less guidance in the areas of social and personal development. These students enter the program well into adulthood, bringing with them a number of responsibilities not generally faced by traditional students (i.e. career, family, organizational involvements, etc.). Support offered to the adult students might focus on services such as academic and career planning, including preparation for graduate or professional school, while placing less emphasis on the fostering of social and personal growth. Colleges and universities must be cognizant of these differences in their support of adult degree programs.

References

Carp, A., Peterson, R. and Roelfs, P. (1974). Adult learning interests and experiences. In Cross,K.P., Valley, J.R. and Associates, Planning nontraditional programs. San Francisco: Jossey-Bass Publishers, p. 11-52.

Dorsey, O.L. and Pierson, M.J. (1988). Assessing quality in a non-traditional degree program--fifteen years later. In Reithlingshoefer, S.J. and Sanford, J.F. (Eds.), Proceedings from the sixth annual conference on non-traditional and interdisciplinary programs, (pp. 20-26). Virginia Beach, VA: George Mason University.

Overmyer Day, L.E. and Sanford, J.F. (1989). Assessment of non-traditional degree programs. In Reithlingshoefer, S.J. (Ed.), Proceedings from the seventh annual conference on non-traditional/interdisciplinary programs, (pp. 442-448). Virginia Beach, VA: George Mason University.

Resnick, D.P. and Goulden, M. (1987). Assessment, curriculum, and expansion: A historical perspective. In Halpern, D.F. (Ed.), Student outcomes assessment: What institutions stand to gain (pp. 77-88). San Francisco: Jossey-Bass.

Rinnander E. (1977). Sources and information for assessing student learning. New Directions for Community Colleges, 5(2), 105-108.

Simosko, S. and Associates (1988). Assessing learning: A CAEL handbook for faculty. Columbia, MD: CAEL.

CONSORTIAL, COOPERATIVE AND COLLABORATIVE PROGRAMS

THE INTERDISCIPLINARY COLLEGE APPROACH FOR SOLDIERS AND SAILORS

Clinton L. Anderson
Steve F. Kime

Introduction

Servicemembers Opportunity Colleges (SOC) is a consortium of over 650 colleges and universities pledged to ease the difficulties of servicemembers seeking a postsecondary education. SOC is sponsored by 13 national higher education associations and the military services. These agencies guide SOC through representation on its advisory board. The function of SOC is to coordinate between the Department of Defense and the academic community and to articulate to each the requirements and needs of the other.

In 1988, SOC incorporated an interdisciplinary network of associate and bachelor degree programs into its education systems for soldiers and sailors. The purpose of this paper is to explain SOC and to show how the interdisciplinary approach evolved and became integral to SOC systems.

SOC and its Programs

Each college or university that is a member of SOC subscribes to SOC Principles and Criteria, a statement of good practice in offering and operating voluntary higher education programs for hundreds of thousands of servicemembers, civilian employees of DOD, veterans and their family members. SOC Principles embody institutional flexibility with thoughtful development of programs and procedures appropriate to the needs of servicemembers, yet recognize the necessity to protect and assure the quality of educational programs. Inherent in the SOC Principles are expectations and standards essential to their translation into performance and action.

SOC Criteria

The SOC Criteria constitute an operational framework for each SOC college or university to extend to servicemembers undergraduate educational opportunities that are sometimes distinct from common institutional practice. The Criteria characterize flexibility essential to the improvement of access by servicemembers to undergraduate educational

---

Dr. Clinton L. Anderson, Senior Consultant, Servicemembers Opportunity Colleges, Suite 700, One Dupont Circle, NW, Washington, DC 20036-1192
Dr. Steve F. Kime, Director, Servicemembers Opportunity Colleges, Suite 700, One Dupont Circle, NW, Washington, DC 20036-1192

programs. The Criteria stipulate that institutional policies and practices be fair, equitable, and effective in recognizing special and often limiting conditions faced by military students. As a minimum, each SOC institution (1) designs its transfer practices to minimize loss of credit and avoid duplication of course work; (2) limits academic residency requirements for active-duty servicemembers to no more than 25 percent of the undergraduate degree program and avoids any "final year" or "final semester" residency requirement; (3) recognizes and uses the American Council on Education's Guide to the Evaluation of Educational Experiences in the Armed Services (ACE Guide) to award credit based on military training courses; and (4) awards credit through the use of at least one nationally recognized, non-traditional learning testing program such as CLEP, ACT-PEP or DANTES DSSTs.

SOC Membership and Management

Membership in SOC, renewed every two (2) years, includes an affirmation of the institution's compliance with SOC Principles and Criteria signed by the institution's president, chancellor or other administrator authorized to make this commitment. From this commitment SOC functions with the advice and counsel of a 21-member Advisory Board and with a staff that provides consultative advisory services to college and military officials seeking to improve the quality and availability of college-level programs offered to servicemembers. SOC is managed by the American Association of State Colleges and Universities, under contract with DOD and the military services.

SOC Systems

Although the broad SOC membership covers all of the military services and their service personnel both active and reserve, the Army, the Army National Guard and the Navy requested that Service-specific systems and programs be developed by SOC. These systems and programs required considerably greater articulation among member colleges and universities that offer associate and bachelor degree programs related to the students' military jobs. Consequently, SOC operates four network systems: SOCAD, the associate degree system for the Army/Army National Guard ; BDFS, the Bachelor Degree For Soldiers system for the Army/Army National Guard; SOCNAV-2, the associate degree system for the Navy; and SOCNAV-4, the bachelor degree system for sailors. These systems consist of groups of regionally accredited SOC members that offer degree programs accessible to soldiers and sailors worldwide. Member institutions guarantee to accept each other's credits in transfer. BDFS and SOCNAV-4 members guarantee a minimum transfer or award of credit for those students who have completed an appropriate SOCAD and SOCNAV-2 degree, respectively.

SOC Systems' Networks

In order to effect detailed articulation in a meaningful manner, associate and bachelor degree programs have been grouped into networks. Each network consists of a number of degree programs in a specific curriculum area. The SOC staff reviews associate and bachelor degree programs offered in support of Army and Navy personnel and places them in networks appropriate to the curriculum. Curriculum exhibits are prepared by SOC based on information provided by the offering institution. These curriculum exhibits are coordinated fully with the offering institution and all other institutions that offer programs in that network.

Once approved, exhibits are published in the systems' handbooks to be used by all SOC colleges and universities that are members of the network systems and by all Army and Navy in-service education officers, specialists and counselors. The specific guarantees, the appropriate transfer courses, recommended credit for military training and work experience and tests are all listed in handbooks which serve as complete operating manuals for their respective systems. System handbooks are updated and republished twice each year.

A "Contract" between College and Servicemember

An official evaluation of all prior learning is issued by the "home" college on either a SOCAD or SOCNAV or BDFS Student Agreement that serves as the student's academic plan and contract for the degree. Guaranteed transfer, which is only in effect after a SOC Student Agreement has been issued, always moves back to the home college or university. For the systems to work for the servicemember-students for which they are designed, it is imperative that home institutions comply with their obligation to issue SOC Student Agreements when their students become eligible for them.

The SOCAD, SOCNAV-2, SOCNAV-4 or BDFS system begins for the soldier, sailor or family member, when a SOCAD, SOCNAV-2, SOCNAV-4 or BDFS Student Agreement is issued by the home college or university: transfer guarantees are valid only after the Student Agreement is issued. All institutions that are members of SOC network systems have agreed to issue a Student Agreement on the standard SOC form for each student who applies for an official evaluation in a program that is part of a SOC system network. The Student Agreement includes a plan for the student, showing the courses the student needs to complete the degree program. As soon as the Student Agreement has been issued, all student guarantees are in effect.

A student may request an official evaluation at any time after he or she is eligible. Institutions may require up to six semester hours of course work with the college or university before an official evaluation is actually conducted. The request for an official evaluation should automatically cause the college or university to issue a Student Agreement. It is the responsibility of the student to request that all transcripts and other necessary documents be provided the college or university that is conducting the official evaluation. The institution that conducts the official evaluation and issues the Student Agreement is the "home college" for that soldier, sailor or family member.

Development of the Interdisciplinary Network

The Flexible Network

When SOC began its development of SOCAD in 1978, the Army expressed a requirement for associate degree programs that emphasized general education and non-traditional credit awarded based on the ACE Guide and testing beyond those that could be grouped in technical networks such as food service, digital electronics, automotive maintenance, etc. Consequently, SOC established the Flexible Network. Associate degree programs meeting the following criteria were listed in the Flexible Network:

1. The institution required no more than 65 semester hours or 97 quarter hours for degree completion in any curriculum offered within the Flexible Network;

2. The institution required as prescribed courses no more than 50 percent of the total credits required for the degree completion in any curriculum offered within the Flexible Network;

3. The institution included a minimum of 50 percent of the total required hours in free elective courses or in broad areas that permitted a wide selection of learning experiences within the Flexible Network;

4. The institution awarded credit for service schools and military experience as recommended in the American Council on Education's Guide to the Evaluation of Educational Experiences in the Armed Services.

Emergence of the Interdisciplinary Network

The advent of the bachelor degree systems in 1987 required the associate degree systems to articulate 2-year programs into 4-year programs. The Flexible Network contained associate degree programs that both could and could not be articulated into 4-year programs. Therefore, the network was split between those associate degree programs that contained sufficient general education to articulate into 4-year programs and those associate degree programs that did not have the amount and/or the flexibility within their general education requirements to provide guaranteed transferability. The criterion used to split the Flexible Network was a minimum of 30 semester hours or the equivalent of General Education courses, not including Physical Education and Health. Programs that met this criterion formed the new Interdisciplinary Studies Network. Those curricula that did not meet this criterion formed the General Studies Network in SOCAD and SOCNAV-2. No guarantees exist regarding the articulation of these associate degrees with any 4-year program.

The new Interdisciplinary Studies Network consists of curricula characterized by flexibility. General education courses make up a large portion of the requirements in each curriculum. Also each curriculum contains a large number of general education and free electives. Examples of degree program titles include: General Studies, Interdisciplinary

Studies, Individualized Major, and Social Science. Those students who complete an associate degree in any SOCAD or SOCNAV-2 Interdisciplinary Studies curriculum are guaranteed to receive the transfer or award of 45 percent of the degree requirements when enrolling in a bachelor's degree curriculum in either the BDFS or SOCNAV-4 Interdisciplinary Studies network, within the stated limitations of the specific curricula found in the BDFS and SOCNAV-4 Handbooks.

The interdisciplinary approach is relevant to today's changing military. For example, it accommodates the newly instituted Army Leadership Development Program. The Army's Chief of Staff Carl Vuono states that this Program "rests upon three fundamental pillars: institutional training, operational experience and individual self-development. (Vuono, 1989, p. 28) The Program is a result of a 1989 NCO Leader Development Study Group study which focused on the need for self-development programs to include those offered through the Army Continuing Education System (ACES). It also emphasized that "NCOs should have the communicative skills of reading, writing, speaking and listening necessary for effective leadership." (Tice, 1989, p. 13) Curricula that are included in the Interdisciplinary Studies Network focus heavily on these skills. Often servicemember-students must first engage in developmental or bridging courses in mathematics and English in order to prepare themselves for success in full scale college courses in these areas.

College degree programs found in the SOCAD and BDFS Interdisciplinary Studies Network, in conjunction with college preparatory courses as needed, provide excellent, individually tailored, self-development programs and assist NCOs in developing the communicative skills needed for effective leadership. The Army may be well advised to encourage NCOs to participate in degree programs in the Interdisciplinary Studies Network with concentrations in technical military job-specific areas. Many servicemembers have enlisted precisely for higher educational opportunities made possible by the entitlements inherent in the Montgomery GI Bill for which they have each contributed $1200 of their own money. Interdisciplinary degrees often serve both the Army's needs and the servicemember's ambitions.

Current Status of the Interdisciplinary Studies Network

To date, the associate degree programs in the Interdisciplinary Studies Network (traditional-delivery) are available at over 150 military bases, communities and camps around the world. In addition, programs in the Interdisciplinary Studies Network are readily available to all soldiers and sailors through alternative delivery and learning assessment options. Meanwhile, the bachelor degree Interdisciplinary Studies Network (traditional delivery option) is implemented only within the United States. Gaps in coverage exist, but as the network grows and becomes better understood, these gaps are expected to disappear. If soldiers and sailors in overseas commands want to participate in programs in the Interdisciplinary Studies Network, they are readily available in the alternative delivery and learning assessment options. As soldiers and sailors express educational needs and desires for bachelor level programs of this nature, more emphasis may be given these programs by base education services officers and specialists and by directors of education in major overseas commands.

Delivery Options

As in most of the other SOC networks, soldiers and sailors have choices of delivery systems when enrolling in degree programs within the Interdisciplinary Studies Network. Three degree delivery options are available:

- Traditional Delivery Option (TDO) consists of approved curricula normally provided through classroom-based instruction and requiring some academic residency for graduation.

- Alternative Delivery Option (ADO), an external degree option, consists of those approved curricula in which the member institution normally delivers instruction entirely through some type of independent study requiring some academic residency (credits taken with the degree-granting institution, regardless of location or delivery option) for graduation.

- Learning Assessment Option (LAO) consists of those approved curricula that require no academic residency for graduation and may not provide instruction at the member institution. The degree may be based entirely on college credits derived from evaluation of learning from other sources or transfer of credit from other institutions.

Guaranteed Transferability

Students with SOCAD and SOCNAV-2 associate degrees earned within the traditional delivery option of Interdisciplinary Studies network documented by SOCAD or SOCNAV-2 Student Agreements are guaranteed to receive the transfer or award of 45 percent of the degree requirements when enrolling in a bachelor's degree curriculum in either the BDFS or SOCNAV-4 Interdisciplinary Studies network, within the stated limitations of the specific curricula found in the BDFS and SOCNAV-4 Handbooks. Each BDFS and SOCNAV-4 curriculum exhibit in this network carries a footnote explaining this guarantee. (See Figures 6, 7, and 8.) Not all traditional delivery institutions provide this blanket guarantee for alternative delivery institutions' SOCAD and SOCNAV-2 degrees. Not all traditional delivery and alternative delivery institutions provide this blanket guarantee for learning assessment institutions' SOCAD and SOCNAV-2 degrees. Information regarding specific institutions can be found in the BDFS and SOCNAV-4 Handbooks.

All BDFS and SOCNAV-4 colleges and universities have agreed to accept General Education elective courses in transfer if taken from a regionally accredited institution, unless an exception is published in the systems' handbooks. Again, there is the stipulation that member colleges in the traditional delivery option are obligated to accept courses taken only through classroom-based instruction. Acceptance of a course for a specific required General Education courses (designated by the institution's course prefix in the curriculum exhibit) requires individual prior approval by the student's home college or university.

An Assessment

SOC's network systems are voluntary, off-duty degree programs designed for Army NCOs and Warrant Officers and Navy Petty Officers. Degree programs in these systems are designed to relate directly to the military occupational specialty or rating of the servicemembers. The Interdisciplinary Studies curricula have the flexibility for being tailored to do just that. LT Cdr David Starkey, United States Navy, in his study of SOCNAV-2 students, found that, when compared with other more technical degree programs within SOCNAV-2, the curriculums in the Flexible Network had some major benefits for Naval personnel:

> First, they offer sailors the best opportunity to use most, if not all, of the credits earned from their rating and service schooling; second, they provide an excellent background in general education, which will assist them in their career as well as prepare them for further education; third, they give servicemembers a great opportunity to gain a higher expertise in their Naval profession by taking college courses that either directly or indirectly apply to their training.(Starkey, 1988)

Prior to his study, Starkey admitted (in his final study report) that he had believed that "students would use the high number of free electives in the Flexible program as an easy road to obtain an associate degree." But as he began to look at student agreements, "it became clear that the students who entered the Flexible program were not taking the easy road to a degree and their ability to transfer their course work to a bachelor's degree was as useful as any of the other degrees within SOCNAV." (Starkey, 1988)

A similar analysis was conducted in March 1990 of Army students in programs within the Interdisciplinary Studies Network. The results of this study indicated that the soldier-student received the basic general education courses (humanities, communications, mathematics, natural science and social science) vital to student's educational development expected academically at the associate degree level and which complement the soldiers' training for their military jobs. But, in addition, these programs maximized the amount of non-traditional credit that the soldiers received for their military training and job experience. In fact, it was discovered that many of these programs reflected a closer military job-relatedness than associate programs listed in the technical networks for which the soldier may have been eligible to participate. (Jankowski, 1990)

The benefits of the interdisciplinary approach are (1) it maximizes job-relatedness; (2) it allows for the award of credit for military occupational specialty/rates and rating training, military job experience, NCO/petty officer leadership training, and testing; (3) it guarantees credit transfer; (4) it minimizes need for resident credit; (5) it links easily with bachelor degree programs; and (6) it allows for continuity if the servicemember-student transitions to civilian life. Both the Army and the Navy are finding that Interdisciplinary Studies programs meet the educational needs and aspirations of many of their servicemembers.

References

American Council on Education (1988). The 1988 Guide to the Evaluation of Educational Experiences in the Armed Services. 4 vol. Washington, DC: Author

Jankowski, B. (Mar. 1990). Results of MOS Credit for Student Agreements in General Studies/Interdisciplinary Studies Networks. Washington, DC: Servicemembers Opportunity Colleges.

Servicemembers Opportunity Colleges (Nov. 1989). Handbook. (Bachelor Degrees). Washington, DC: Author

Servicemembers Opportunity Colleges (Nov. 1989). Handbook. (Associate Degrees). Washington, DC: Author

Starkey, D. (Mar. 1988). A review of the SOCNAV Flexible Program. (Unpublished Intern Report.) Washington, DC: Catholic University of America.

Tice, J. (Sep.4, 1989). Army Times, pp.12-16, 60.

Vuono, C. E. (Oct. 1989). Today's U.S. Army: Trained and Ready in an Era of Change, Army, pp.12-32.

NOTE: Colleges and universities that desire more information concerning the Interdisciplinary Studies Networks in SOC network systems should contact a member of the SOC staff either by telephone: 800-368-5622 or by writing SOC, Suite 700, 1 Dupont Circle, N.W., Washington, DC 20036-1192.

BUILD SKILLS FOR THE PRESENT -- LEARN FOR THE FUTURE

David J. Caris
Nancy A. Putinski

Introduction

The 1990s will demand that businesses and their employees assimilate and profit from new technologies. To do so, companies must adopt new roles and workers must acquire new skills. Innovative companies that have embraced the new technologies and methods are already reaping the benefits; those that cannot likely will not survive.

The Ohio Bell Telephone Company, in partnership with Cuyahoga Community College's Unified Technologies Center (UTC), has developed a unique learning system for employees, the Information Resources Center. The Center offers training and re-training tailored to the needs of individual students. Scheduling is flexible so that students can maintain normal work hours. Employees are pre-tested and interviewed to ensure that they are placed at the appropriate level in a course of study and that they enter a course where they are comfortable. Learning is optimized and there is no wasteful duplication of time and materials.

The Center offers continuous intake, so that students may begin at any time. The learner may choose from a wide variety of instructional delivery systems, from traditional print to audio, video and advanced computer programs. This paper will focus on how this unique training solution was developed, how it has been expanded throughout Ohio, and how other corporations are working with Ohio Bell and the UTC to adapt the model to their own needs.

Background

Ohio Bell, in partnership with the Communications Workers of America, has historically been committed to providing educational opportunities to its employees. Each of these opportunities is designed to help employees take charge of their own careers. Programs include tuition aid, classes designed to help employees return to school, career counseling, career planning, performance appraisal systems and a range of seminars and workshops. A joint union-management committee regularly discusses training and re-training issues.

David J. Caris, District Training Manager, Ohio Bell Telephone Company, Cleveland, Ohio
Nancy A. Putinski, Director, Interactive Learning Service, Cuyahoga Community College, Cleveland, Ohio

As the 1990s approached, regional and national studies warned that significant changes could be expected in both the type of work to be done in the future and the type of workers available to perform it. The workforce of the future would need higher problem-solving and reasoning skills than those of today's workforce. Future work would require computer literacy and workers broadly enough educated to apply their knowledge to independent action.

Ohio Bell Personnel Vice President James J. McGowan noted: "More than one million Ohio workers will have to be re-trained just to hold the jobs they have now, because technology is changing their work. We see this happening in our own company -- eighty per cent of our employees hold jobs today that are significantly different from the jobs they held just five years ago. Tomorrow's workforce is going to need training as well, and when we read that three-quarters of the new jobs in the next decade will require post-secondary education, we can see that workers will have to be ready to acquire that education."

The need for a formal program was clear. In 1987, Ohio Bell formed a partnership with Cuyahoga Community College "to provide the most effective and efficient instructional program for employees...to manage their careers."

Partnership With Higher Education

The partnership between Ohio Bell and Cuyahoga Community College is an example of successful collaboration between business and higher education to prepare the workforce for the technology of the future. The new technology takes many forms, but can be observed in systems such as office automation, telecommunications, computer-aided design, quality control systems, materials management and computer-assisted manufacturing, among others.

The authors believe the successful partnership contains two key elements. The first is a shared vision to develop a vehicle for bridging the skills gap between the labor supply and current and future manpower needs. The second is a clear direction and commitment to the goal, which includes dedicating personnel from both organizations to the task.

Developing the Program

The program was developed on the lines of the educational philosophy of Cuyahoga Community College, which says in part that:

> Learning is a lifetime process, and
>
> Differences among individuals require a variety of means to satisfy diverse educational needs.

Four major goals were identified for the new training program:

Assist employees in preparing for the technological demands of the future;

Assist employees in preparing to enter Ohio Bell's Future Tech two-year degree program or other tuition-assisted programs;

Stimulate an interest in continued education for both management and non-management employees that would lead to lifelong learning, and

Provide an opportunity for Ohio Bell employees to increase their self-confidence.

The Future Tech program mentioned above is an example of the ongoing nature of the collaboration between the two institutions. First developed at Cuyahoga Community College, and now offered statewide, Future Tech leads to a two-year associate degree in applied electronics for qualifying Ohio Bell employees. The new training program helps employees prepare to enter Future Tech and other college-level programs.

Ohio Bell and the Unified Technologies Center developed ten assumptions about what the "ideal" approach might be to meeting employee learning needs. The assumptions focused on learning rather than on teaching, and suggested an approach which would be:

Well-planned, organized and managed;

Quality assured;

Carried easily to multiple locations;

Cost effective and efficient;

Innovative, using the latest instructional technologies;

Sensitive to adult learning principles;

Based on pre-testing, post-testing and learning activities;

Designed to build self-confidence and self-esteem in participants;

Tailored to incorporate prior learning experiences, and

Planned to address differing needs, learning styles and motivational levels.

The solution was the Information Resources Center, a new approach to training and re-training. The IRC provides a baseline of computer and communications technologies that respond to the needs of the individual learner. The Center has 120 PC-equipped workstations that provide:

Individualized self-paced learning;

A competency-based, open-entry/open exit format;

The latest instructional technologies, including interactive videodisc, computer-based instruction and a computer-managed system which permits networking to other locations;

Immediate feedback;

Responsibility and self-direction;

Maximized time-on-task;

Individualized attention;

Positive reinforcement, and

A supportive environment.

In addition to the technology, the program provides a staff of experienced facilitators, lab assistants and resource clerks. Problems or questions are handled by a skilled individual who can help the student choose the right media from which to learn in the most comfortable and appropriate way.

A computer-managed learning system tracks the student's progress through each instructional module. The system can randomly generate test questions to evaluate the student's understanding, and allows for a detailed evaluation of competency at various levels of the module.

Preparation For Technology

The Preparation For Technology (Pre-Tech) Program provided in the Information Resources Center features four major areas of study:

Mathematics	Includes topics from basic arithmetic through algebra, trigonometry and calculus
Communications	Includes reading comprehension, writing, grammar, interpersonal communications and management development
Computer Basics	Includes introductory computer concepts and a hands-on approach to microcomputer software applications

Electricity/ Electronics	Includes an introduction to electricity and electronic concepts and skills

Because training and re-training in the Center is primarily learner-controlled rather than instructor-controlled, the student's learning pattern shifts from the customary passive classroom role to active individual participation.

When a learning module is finished, the student receives a certificate of completion. At that time, the student may exercise an option to earn college credit for the completed module. Accumulated credits help to stimulate interest in further studies and lay the foundation for lifelong learning.

Indicators of Success

There are three major indicators of success in the joint venture:

Increased motivation and success for adult learners

The IRC model has demonstrated the effectiveness of a student-centered learning environment. A recent survey of Pre-Tech participants revealed that more than 95 percent plan to enroll in more Pre-Tech subjects. In addition, more than 95 percent indicated that they did not feel a more structured program would be beneficial to them.

Expansion Throughout the State of Ohio

The Pre-Tech program has grown from its first site in Cleveland, Ohio to three more locations around the state. More than 800 Ohio Bell employees have benefited from this program and its unique approach.

In addition, the Ohio Board of Regents has endorsed the Ohio Bell/Cuyahoga Community College partnership as an example for two-year colleges around the state. Chancellor William Coulter says, "The Pre-Tech program serves as a model for the state in providing individualized, self-paced instruction -- in skills that even five years ago were not the imperative for a skilled workforce that they are today."

Expansion To Other Corporations in Northeast Ohio

In mid-1989, a consortium of business and industry organizations was formed to address the training and re-training needs of employees in Northeast Ohio. The consortium is designed to expand partnership opportunities of the type created by Ohio Bell and Cuyahoga Community College, to build on programs such as Pre-Tech that are already in place and to create a shared approach to the common issue of workforce training.

The partnership has helped Ohio Bell:

Remain on the leading edge of new technologies;

Re-train and upgrade employees to use those technologies, and

Provide human resource development opportunities that have resulted in increased productivity and greater worker satisfaction,

Through instructional programs that are:

Cost effective,

With measurable results,

Linked to overall corporate planning, and

Individualized to employee needs.

Next Steps

The latest report from the American Society For Training and Development states, "We call on the whole learning enterprise to put work-related learning at the head of the national agenda for the 1990s. Education, employers and government have a stake in building a competent workforce -- each has a clear role to play. We call on these major players to collaborate in action -- to increase the capacity of the nation's learning system for flexible adaptation to meet the demand of the global economy."

The strength of higher education depends on the ways in which harmonies between colleges and industrial and commercial enterprises are realized. Serving corporate needs through educational partnerships has been demonstrated successfully in Ohio. It is a way to...

BUILD SKILLS FOR THE PRESENT -- LEARN FOR THE FUTURE.

AFTER THE WEDDING
OR
MAKING A GOOD IDEA REALLY GREAT

Lorraine F. Cecil
Edward G. Gersich

Introduction

Strong off-campus programs are no accident, nor are they hastily achieved. A program which evolves into a consortium with institutions from other systems has some very obvious strengths and some equally obvious vulnerabilities. This situation may be easily understood metaphorically. Formalizing such an arrangement takes place after a suitable "courtship" just as weddings do. Public attention, congratulatory phrases, and perhaps the giving of gifts all take place amidst smiles and cheers. Within a few days, however, euphoria fades and everyone waits to assess the stability and the productivity of the union.

Such is the situation with the Arrowhead University consortium in Northeastern Minnesota. It was formed by Bemidji State University, a member of the State University System; the College of St. Scholastica, a private Catholic college in Duluth; and the University of Minnesota, Duluth, a branch of the University of Minnesota.

The consortium, operating through a Board of Providers, delivers undergraduate and graduate courses to the Iron Range region through the Arrowhead University Center. The public has been watching all this year to see whether the formal agreements and the Center staff really have provided increased offerings and services to the adult students. One could say that creating the consortium and the Center was certainly a good idea; it has not yet been proven whether it is a great idea.

The Players

In order to understand the situation, it is necessary to know who is involved. Bemidji State University, hereafter referred to as BSU, received a legislative grant in 1987 to study the feasibility of establishing an Iron Range Center to facilitate and expand the work they had been doing since 1975. They then invited the College of St. Scholastica, hereafter referred to as Scholastica; the University of Minnesota, Duluth, hereafter

---

Lorraine F. Cecil, Coordinator, External Studies, Bemidji State University, Bemidji, Minnesota
Edward G. Gersich, Director, Center for Extended Learning, Bemidji State University, Bemidji, Minnesota

referred to as UMD; and the five community colleges in the Arrowhead consortium (Rainy River at International Falls, Vermillion at Ely, Mesabi at Virginia, Hibbing at Hibbing, and Itasca at Grand Rapids) to join them in the Arrowhead consortium. The consortium hired College Board and Martin & Associates to conduct the feasibility study. The feasibility study revealed a strong latent demand for educational services and the Board of Providers (presidents of the four-year institutions and chancellor of the community colleges) asked the legislature for funding. The legislature provided funding, albeit less than requested, and additional funding was provided by the Northeastern Minnesota Initiative Fund. The "wedding" itself received media attention and generated considerable excitement. The old names and alliances were cast aside as the Arrowhead University Center proclaimed its existence through new signs, stationery, and merged staffing (See Fig. 1 for the geographic area served.)

The Problem of a Suitable Site

Brides and grooms bring new hopes and shared dreams to their home. Their shared future floats before them and they may feel that nothing can stop them. They soon learn, however, that they have also brought their entire pasts with them. If there are unresolved problems, the future itself may be in peril. Changing the Bemidji State University Iron Range Center to the Arrowhead University Center did not change the players or their dreams; it did, however, alter their expectations and ways of meeting them.

One expectation dealt with a primary site. One would not expect that where a center was established would be an overriding concern; it would seem that what happened through a center should take precedence. One needs to keep in mind, however, that a number of factors have historical roots and need to be dealt with before a final conclusion can be drawn. Historically, Bemidji State University delivered Extension classes to this area in the 1960's. Activity was stepped up in 1974 when two prospective students visited the Coordinator of External Studies and asked if there was a major which could be delivered to them which would be useful, interesting, and available. Both men were involved in iron mining and said they had many, many co-workers who would also be interested. After a series of interest meetings, it was determined that there was a large group of men who wanted a degree in Industrial Technology. The first of these classes was taken to the Iron Range area Winter Quarter 1975.

In determining a primary site, the necessary facilities for some classes dictated a Virginia location, a distance approximately 130 miles from campus. When possible, classes were offered at Hibbing, approximately 100 miles from campus. Since all BSU instructors were teaching the Extension classes on an overload basis, it was sometimes hard to get them off campus in time to drive to Virginia for a 6:00 p.m. class. Practicality thus became a major factor in choosing a primary site.

As time went on, other majors were added to the list of those delivered in the Iron Range area. Hibbing and nearby towns continued to be the main sites used because the distance from campus was easier to handle. Furthermore, an analysis of where students lived revealed that this site was centralized for them. Moving classes to Grand Rapids meant that the faculty was 30 miles closer to campus, but students who lived in the eastern range area had further to travel. In fact, many of them refused to do so.

After the Arrowhead University Center was formed, many discussions were held. Headquarters were temporarily established at Hibbing Community College. This institution had always allowed BSU to use its classrooms and had made room available to house a part-time programmer/advisor employed by the Center for Extended Learning at BSU. Mesabi Community College offered its services as well; this institution had also provided an office for our programmer/advisor and maintained that there were many unserved students in the area who would flock to classes if a center were established there.

Still another site was mentioned as infinitely superior to all others--the public school at Buhl which is being phased out of existence due to consolidation with Mt. Iron. This leaves an entire physical plant with no reason for existence. Advocates of this site maintain that the building can be remodeled to include more than adequate office facilities, space for financial aid and placement personnel when they are on-site, and classrooms which would accommodate all of the institutions who bring classes to the area. Opponents argue that geographically it is not quite central to the area, it is basically unsuitable for this purpose, and is a political hot potato.

An analysis of where the BSU students come from, by zip code (see Fig. 2), indicates that the current student body divides into clusters centered around Grand Rapids, Hibbing, and Virginia. While it does appear that the Hibbing cluster contains more students, the number is not significantly larger at this time. There does not appear to be any dramatic evidence that there is an advantage to students to have one central site. On the contrary, the clusters might suggest that multiple sites would be advantageous to students.

Course Offerings

There is perhaps no universal definition of a happy marriage. Most observers look for the couple to proceed much as before with more focus and visible signs of shared happiness. The fact that the signs are not always visible doesn't stop observers from looking and commenting.

Undergraduate Offerings

One way of measuring the effectiveness of the Arrowhead Consortium is to compare the undergraduate course offerings to those offered before the Center was established. College Board, in conducting the feasibility study recommending that an Arrowhead University Center be established, cautioned that a student-centered approach be taken. This was defined as making an attempt to see what students wanted, then taking those courses to them rather than telling them what was available.

When the Arrowhead Consortium was formed in 1988, this was the situation. BSU was delivering Applied Psychology: Human Services, Business Administration, Elementary Education, Industrial Technology, and Nursing. St. Scholastica was delivering Management and UMD was delivering only Ind. Study. The Board of Providers had agreed that they would support the recommendations of the College Board and vigorously seek funding from the legislature. When legislative support was provided, an advisory committee was formed to handle implementation of College Board recommendations and to advise the Center staff regarding routine operations.

General interest meetings were held at four sites--Ely (Vermillion Community College), Virginia (Mesabi Community College), Hibbing (Hibbing Community College), and Grand Rapids (Itasca Community College). As a result of those meetings, UMD will begin offering a Technology/Electronics major Fall Quarter 1990 and BSU has begun an Accounting major. BSU also started a new class in Business Administration Winter Quarter 1990, began the first year of a planned three-year phase-out of the Industrial Technology major, and now offers a partial coaching certificate. BSU will also actively explore the feasibility of offering a writing concentration and a Political Science major. Other majors mentioned above continue to be offered.

Graduate

All of the four-year institutions are primarily undergraduate institutions, but all offer some graduate degrees. When the consortium began, there were no graduate programs offered in the area, although there were occasional graduate courses. St. Scholastica now offers a Masters in Management and BSU is getting ready to offer a Masters in Education. No assumption has been made that these will necessarily be the only ones made available.

Student Services

At the time the feasibility study was conducted, some concern was expressed concerning student services. Both Scholastica and UMD are approximately 40 miles from Virginia and close to 70 miles from Grand Rapids and Hibbing, while BSU is 70 miles from Grand Rapids and close to 130 miles from Virginia. Distance alone could be a deterrent to providing such support. Three of the most prominent of those concerns have been met head-on and, if not completely resolved, have been considerably mitigated.

Library

Since most of the classrooms used are actually in community colleges, it is natural to assume that Extension students would use those libraries. This is particularly so if the students are graduate of community college. There were obvious drawbacks to such an arrangement, however, which became more and more apparent as the number of students increased. Periodicals and references stocked to support community college studies are inadequate for the needs of upper division students. Even before the consortium, BSU had invested more than $20,000 in materials for academic programs offered. Money from a Blandin grant has given each department $4,500.00 ($27,000.00 total) to order books and journals to go into a library to support the needs of those students. Furthermore, a micro computer with word processor has been installed at Itasca, Hibbing, and Mesabi Community Colleges; while they are primarily for the students of Arrowhead University Center, they may also be used by the community college students. Since the Accounting major is centered in Virginia, those materials have gone to Mesabi; Business Administration is centered in Hibbing and those have gone to Hibbing, etc. In addition, the community college libraries have computer assess to the BSU library files. Books may be checked out through Inter-Library Loan or students using the campus library may be issued a temporary library card. Funds have also been provided so that community college libraries may remain open longer in the evenings.

Financial Aid

Financial aid, while not administered quite the same on each campus, is still financial aid. Since BSU is the fiscal agent for the consortium, part of the grant is used to pay for financial aid service to the Arrowhead University Center. A financial aid counselor goes to the Center one day a month. He can provide very specific assistance for students taking BSU classes and general help for those from Scholastica. In addition, he goes to each of the information sessions to answer general questions and deal individually with specific questions.

A Blandin grant has provided additional funds for scholarships and emergency loans. One of the scholarships, the Transition Grant, is for students whose special circumstances necessitate them taking community college classes while being BSU admitted students; the grant essentially pays for the course from the community college. There is also an Adult Learner Incentive Scholarship to encourage adults to attend school.

Advising/Counseling

There are many college administrators who whole-heartedly support off-campus programs but worry about lack of proper advising. The feeling is that on-campus teachers who teach on an overload basis are simply not available before and after class and adjunct faculty are at a distinct disadvantage because they don't really know institutional policy and procedures that well.

This problem has been dealt with in two ways. BSU had already been paying for release time or overload for advisors to the various off-campus programs, as had Scholastica. This meant that those instructors went to classrooms at the sites to provide advising services. While this continues today, BSU has taken still another step. The Business Administration Department has hired a full-time instructor who will live and work in the area and handle routine advising as part of duties assigned. They expect to add another individual Fall Quarter 1990. The Accounting Department expects to add a staff member who will live in that area effective Fall Quarter 1990, as does The Psychology Department.

Good Idea? Great Idea?

It is difficult to make sweeping conclusions about a comprehensive program before the facts are all in place. A first wedding anniversary, or even a fourth or fifth, is no guarantee that a marriage is sound. The Arrowhead University Center is less than one year old. There are some issues raised in the feasibility study which have not been dealt with, e.g. the issue of day-time classes and multiple site delivery for all of the majors. Nevertheless, the student-centered approach has indeed provided more classes for students and more services. The temporary site in Hibbing is functioning well and the programs are growing. Does this mean that the Arrowhead University Consortium was a good idea? We contend emphatically that it does. Does it mean that it was a great idea? It is probably too soon to tell, but we're betting on it.

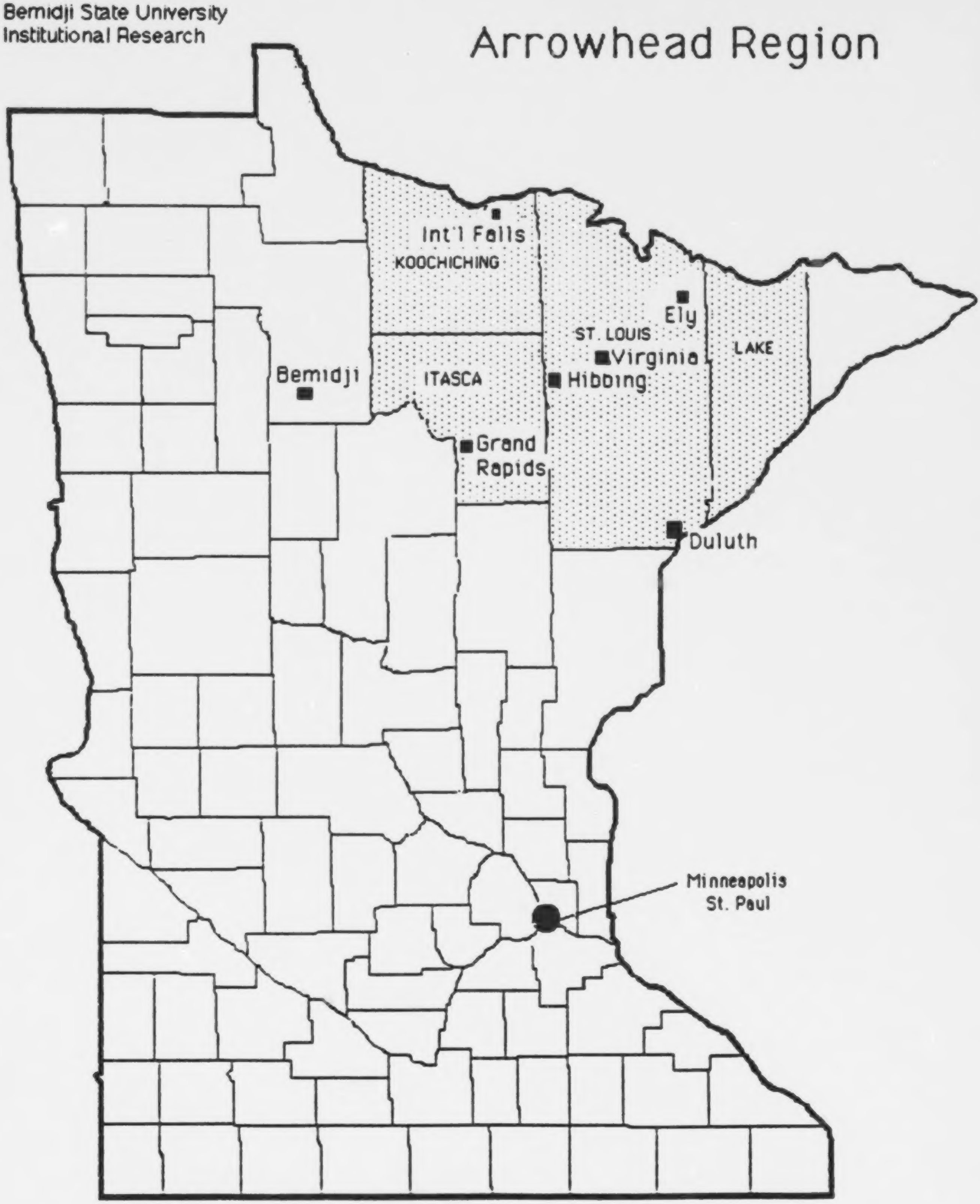

Bemidji State University
Institutional Research
Arrowhead Region
Int'l Falls
KOOCHICHING
Ely
ST. LOUIS
Virginia
LAKE
Bemidji
ITASCA
Hibbing
Grand Rapids
Duluth
Minneapolis
St. Paul

FIGURE 1

BEMIDJI STATE UNIVERSITY
INSTITUTIONAL RESEARCH

ARROWHEAD REGION EXTENSION ENROLLMENT

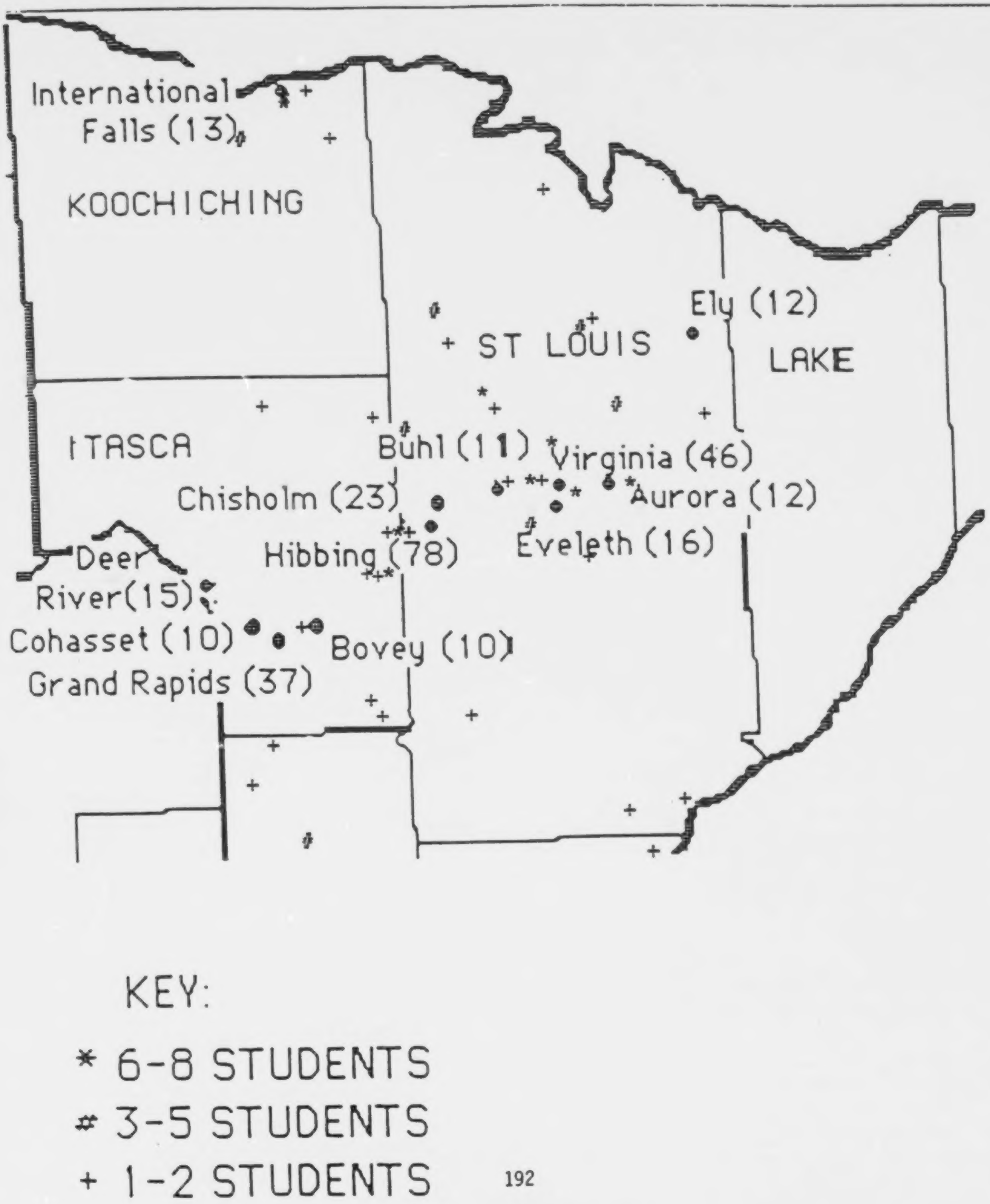

International Falls (13)
KOOCHICHING
ST LOUIS
Ely (12)
LAKE
ITASCA
Buhl (11)
Virginia (46)
Chisholm (23)
Aurora (12)
Hibbing (78)
Eveleth (16)
Deer River (15)
Cohasset (10)
Bovey (10)
Grand Rapids (37)
KEY:
* 6-8 STUDENTS
# 3-5 STUDENTS
+ 1-2 STUDENTS

FIGURE 2

LINKING TECHNOLOGY AND CURRICULUM WITH BUSINESS AND INDUSTRIAL ADVISORY COMMITTEES

Thea M. Hoeft

Introduction

A variety of terminology has been used throughout the professional literature, to identify what this author will describe as Business and Industrial Advisory committees. As a matter of fact, as we enter the decade of the 1990s it appears to be a more common place to read about or hear about all levels and types of educational institutions linking up with business and industry for the expressed purpose of exchanging expertise or influence. We often hear that where government programs alone have failed to provide guidance and support for education programs that industry should be involved in some sort of partnership with education. A cadre of 2 and 4 year colleges and universities continue to explore the endless possibilities of such partnerships.

Historically these partnerships have been envisioned to be symbiotic in nature, although not always clearly distinguishable as such. A brief discussion of the roles of these committees from technology transfer to fundraising will be presented.

Linking technology and curriculum together based upon the feedback from Business and Industrial Advisory committees has assisted the Milwaukee School of Engineering (MSOE) to keep abreast of ever changing technological developments in the areas of business management and engineering since 1913.

Objectives of these committees, how they are organized and their actual activities will be presented in depth.

Specific details concerning business and industrial advisory committees operating policies, and reporting structure in the institutional organizational chart will be analyzed.

Conceptualization and Roles

In exploring the concept of linking technology, curriculum and business and industry together, Lynn Johnson (1984) identifies these relationships by type and level of interaction. Johnson uses the term relationship rather than partnership because at the time of his research, he felt that although some "examples of partnerships were emerging none existed in the fullest sense of joint planning and management or extensive interaction on many fronts". (p.5).

Thea M. Hoeft, Ed.D., Associate Director of Admissions and Retention, Division of Continuing Education Milwaukee School of Engineering, 1025 N. Milwaukee Street Milwaukee, Wisconsin 53202

Johnson's (1984, p.81) typology delineates three major interactions; Research and Development Relationships; Human Resource Development Relationships; and Entrepreneurial Development Relationships. The level of interaction from lowest to highest are identified as the following; Academic Activity Oriented toward Industry; Academic Activity in Collaboration with Industry; and Academic Industrial Partnerships. These relationships he connects in a third dimension to the concept of economic growth and how it relates to the type of interaction.

Throughout the literature one can find specific examples that could be grouped under each typology that was previously discussed. The roles or functions that advisory committees/boards are charged with are numerous and varied, too exhaustive an undertaking to list; however, a few examples follow:

- Develop credit and non-credit curriculum
- Assist in securing funding and donations to upgrade facilities and equipment
- To integrate and transfer technology
- Assist in entrepreneurship
- Develop collaborative research endeavors
- Promote understanding of the interdependence between business, industry and education

To some extent, the role that advisory committees take on is dictated by the mission and philosophy of the educational or industrial organization. Third party concerns can also shape these roles. Accreditation agencies such as the Accreditation Board for Engineering and Technology (ABET) in the section of general criteria for engineering technology defines Industrial Advisory committee composition, roles and criteria for effectiveness (ABET, p.187-188).

Industrial Advisory Committee

1. Industrial advisory committees can contribute significantly to the growth and development of engineering technology programs as a means of assuring technical currency of the program and maintaining close liaison with the supporting and employing industries.

   a. An effective industrial advisory committee should:

      (1) Be broad-based and composed primarily of practicing engineers and senior engineering technicians with active interests in the institution and the program it offers and with intimate knowledge of the current work of engineering technicians and the work they are likely to do in the near future.

(2) Meet regularly with the administration and the faculty to discuss program needs, progress and problems and to recommend solutions.

(3) Review program offerings and course content periodically to ensure that the current and future needs of engineering technicians in industry are being met.

b. Industrial advisory committees should also be encouraged to:

(1) Assist in the recruitment of a competent faculty and of potentially capable students.

(2) Assist in the placement of graduates.

(3) Assist in obtaining financial aid and part-time employment for needy students.

(4) Assist in obtaining financial and material resources for the institution and in assuring a high level of community awareness and support of the program offerings.

2. To be effective, advisory committees must be properly supported, logistically and administratively. They should be given meaningful assignments that are properly within their areas of expertise and their advice must be given serious consideration. Whenever their advice cannot be taken, such decision must be supported by good reasons.

Business and Industrial Advisory Committees at the Milwaukee School of Engineering

History

Ten years after the Milwaukee School of Engineering (MSOE) was founded the school initiated the formation of an Industrial Advisory Board to review and guide curriculum development. (Bolton, p.18). Its initial membership consisted of 4 members. The school principal, a high school principal and 2 plant engineers. By 1918, the combination of educators, business and industry representatives totaled 44, and the assemblage was called the Advisory Council. The original membership served in the formation of the Corporation of MSOE, signing Articles of Organization in 1932. In 1952 the Industrial Advisory committees were reorganized into twelve committees, one for each of the school's departments.

The written minutes of Industrial Advisory Committee meetings between 1959 and 1962 link committee roles to the the following activities:

- Direct development of curriculum including course content
- Suggesting possible textbooks
- Proposals to utilize new technology (data processing) throughout the school
- Providing potential faculty to teach
- Suggesting plans to promote new evening classes

Specific Activities

MSOE's Business and Industrial Committee's have historically been involved in providing the school with suggestions on the most current technological, and management developments in an effort to support the schools mission in preparing students for entry-level positions, in industry, business and government. (Policy and Procedure Manual, p.1, 1983). With this as an objective the 22 Business and Industrial Advisory committees currently in operation are involved in the following activities: (Policy and Procedure Manual, p.3)

- Suggest and develop new curriculum
- Update current curricula
- Quality control function for evaluation of both depth and breadth of program
- Solicitation of special lecturers for regular and special academic offerings, particularly in the Division of Continuing Education
- Develop Continuing Education seminars or short courses
- Liaison with local and national industry for such things as counseling of current students, setting up tours, advising students on special or senior projects

Ad hoc committees may be formed to focus on a specific concern and be discontinued when the larger committee deems that its function has been completed, thus all activities are not common to all committees at the same time.

Organization and Committee Composition

MSOE's committees are organized via nomination by faculty or committee members and appointed through the Senior Vice President of Academics to the President of the school. Ideally, committee members serve for 3-5 years in groups of 7 to 15 individuals. Department chairpersons and faculty participate as ex-official committee members.

A chairperson of each committee is appointed by mutual consent and always represents business and industry. A secretary is always appointed from the academic department. Formal minutes are kept and distributed. Meetings are scheduled once or twice a year and more frequently when new curriculum is being developed. Meetings are located on campus but industrial hosts are certainly welcome to schedule the meetings at a particular business or industry. If the meeting spans a meal time, food is provided. One out of three school officers attend each meeting; the President, Chancellor, or Senior Vice President of Academics.

The added value to business and industry is not only increased understanding of the interdependence relationship with education, but also assisting in shaping the human capital necessary to provide the labor force with entry level graduates for the future. Where students get employed upon graduation is of concern to the school. Business and industrial advisory committees often consider possible places of employment for students from educational programs. This consideration is especially critical when new educational programs are being developed and market analyses are being reviewed. For school placement rates averaging in the 90th percentile, to continue this consideration is a constant one for both the school and the Business and Industrial committees.

The long and successful relationship that the school has maintained with business and industry can be characterized by Johnson's (1984) typology of Human Resource Development, with the primary focus on curriculum guidance and development. The school expects to keep this primary focus and actually audits committee activity to insure it. The auditing process is accomplished by the attendance of one of the three school's officers.

Given the mission of the school this type of relationship is likely to exist well into the future.

References

Accreditation Board for Engineering and Technology (1989) Criteria for Accrediting Programs in Engineering Technology Fifty Sixth Annual Report. pp. 178-199.

Bolton, Harry F. (ed. 1977) MSOE 75 years. Milwaukee School of Engineering. pp. 1-111.

Davis, Thomas (1990) Interview About Industrial Advisory Committees Milwaukee School of Engineering

Johnson, Lynn G. (1984) The High Technology Connection: Academic/Industrial Cooperation for Economic Growth. ASHE-ERIC Higher Education Research Reports, pp. 1-115.

Matthews, Jane B. & Norgaard, Rolf (1984) Managing the Partnership Between High Education and Industry. National Center for Higher Education Management Systems, pp. 1-204.

Policy and Procedure Manual. (1983) The Milwaukee School of Engineering, pp. 1-3.

Ungrodt, Richard (1977) Industrial Advisory Committees. Paper presented at College-Industry Educational Conference.

SERVING CORPORATE NEEDS THROUGH PARTNERSHIP MODELS

Carol S. Hopson
William J. Hierstein

Introduction

Many community colleges find themselves faced with the need to provide programs that assist their communities with economic development as well as the need to provide high quality academic programs for the students they serve. It is sometimes a seemingly impossible task to satisfy all of the needs in one effort. However, working partnerships between businesses and community colleges can prove to be the answer to some of the enormous problems facing higher education today.

While businesses and industries claim they cannot find well-trained employees who can perform the specific tasks required of them on their jobs, they often balk at the idea of students having to complete traditional courses in English and mathematics. At the same time, students who complete programs without first acquiring these skills often find themselves left out in the job market.

In an attempt to offer a meaningful partnership with business and to provide adequate educational programs for students, Delgado has planned an integrated educational strategy. As part of the IBM Computer Integrated Manufacturing (CIM) Alliance, Delgado is opening a technology demonstration center which will train students in the use of high technology in the manufacturing, warehousing, and movement of goods. Part of this program is the teaching of Computer Assisted Drafting (CAD) and Desktop Publishing. Along with the high technology program and using the same equipment, students in this program will take their college English composition courses. By offering students an alternative style for studying English, they will see the relationship between the technical program and the need for the development of academic skills.

This paper discusses the planning process used to arrive at the rationale for the development of this program, the decisions which were made, and the inter-action of the faculty involved.

Dr. William J. Hierstein, Provost & Vice President for Academic Affairs, Delgado Community College, 501 City Park Avenue, New Orleans, LA
Dr. Carol S. Hopson, Director of Faculty and Program Development, Delgado Community College, 501 City Park Avenue, New Orleans, LA

Creating Business and Education Partnerships

Much emphasis is being placed on the development of partnerships between institutions of higher education and businesses and industries such as the one between Delgado Community College and IBM. This is seen as a prospective cure for the shortcomings in education and as a means of re-establishing the American economy. An article by Carol Cross in the June 19, 1989 Community College Week explains that IBM officials predict that the broad-based network of community, technical and junior colleges will handle the bulk of the load in attacking adult literacy problems, particularly given recent interest in workplace literacy rather than traditional tutoring programs.

Cross says that John J. Akers, IBM Chair and other executives believe that the "underpreparedness of the American workforce is the greatest single threat to national security this side of the holocaust." It is believed that education plays an essential role in the vitality of the nation and the current outcomes are not adequate. Many feel the current educational system is not working and we cannot ignore the failure of the American system to equal foreign countries in mathematics and literacy.

While these partnerships can be worthwhile, consideration has to be given to many different aspects of these arrangements.

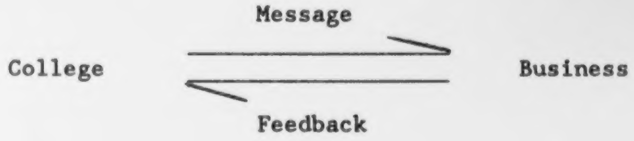
First, business is willing to invest its money, equipment and expertise in education if the result of this investment appears in the profit statement of the business within a few years. With this investment, companies also expect to have some input into what is being offered in the designated area.

Second, education, particularly higher education, has been under attack on many fronts for not providing a well-trained labor force to meet the needs of the economy. By working directly with businesses, colleges can attempt to meet the needs of business and address some educational problems.

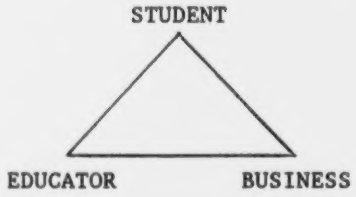
As a given school and business come together to form partnerships, a dialogue begins in which each party attempts to establish its needs and to show how the other party can fulfill these needs while at the same time fulfilling some of its own needs. Through this dialogue a program usually emerges which, on the surface appears to satisfy both business and education. As an example, let's look at ABC Building Block Co. They produce the best blocks in town and DEF Community College educates most of the people who will eventually work for ABC. The company and the college join together in an alliance to train people to work for ABC. The college benefits in that the company provides all of the necessary work stations for training. The company benefits in that the college will now buy all of the supplies for these work stations from ABC and the students who complete the program will be educated, or trained, as the case may be on ABC equipment.

most businesses and even most colleges and universities
a technological partnership. This is good! In fact, it
It was

expect to get from a technological partnership. This is good! In fact, it is in many respects just the spark needed by the colleges and businesses to move into the twenty-first century. But, this picture is not perfect, at least it is not yet complete. The diagram below shows the flow of information as described.



However, this flow of information omits the most crucial element that should be the primary concern of all if business/education partnerships are to offer a truly unique and innovative way to offer educational programs. This missing factor is the student who participates in this or any similar program.



Therefore, to develop a workable business/education partnership for the teaching of high technology, it is an absolute necessity that the flow of information for the development of the program and for implementing the program must be a triangle.

Without the inclusion of the needs of students in the development process, there is no chance for a successful implementation. It was with this premise that Delgado Community College and IBM began the planning process that ultimately led to Delgado being selected as the 57th college officially accepted into the IBM CIM Alliance.

The main purpose of the alliance is to train individuals and to encourage the use of high technology, particularly computers, in the area of manufacturing. Delgado Community College considers as part of its mission support for the economic development of the service area. Therefore, the college seeks to offer new and innovative programs which stimulates economic growth and development. The CIM Alliance fits that description. In the early stages of the discussions with IBM, the college President and Vice President met almost weekly with IBM personnel in New Orleans. Together, this group decided that the needs of IBM, Delgado Community College, and the New Orleans metropolitan area were compatible with the aims of the Alliance Program.

It was then that the college established a CIM committee of faculty members who would or could be involved in the development of the curriculum for computer integrated manufacturing. The initial committee was composed of the Vice President for Academic Affairs, the Director of Faculty and Program Development, the Computer Aided Drafting Instructor, the Chair of the Engineering Division, an Electronic Servicing Technology Instructor, two Electronics Instructors and a Computer Numerical Control Machinist Instructor who also teaches mathematics. This initial CIM Committee began to develop the proposal which would ultimately be submitted to IBM. During this part of the planning process, one of the CIM Committee visited several existing IBM CIM Alliance schools. Two people went to Florida and four went to the University of Southwestern Louisiana, the nearest school in the alliance. The committee continued to meet monthly and to develop a proposal which would secure the needs of all interested parties.

The team from IBM-New Orleans worked closely with the Delgado Committee to determine the best plans for our situation. As the proposal started to take shape, the elements of it surfaced. The Delgado CIM program would include CAD (Computer Assisted Design) component which would incorporate the existing drafting courses. It would also include CNC (Computer Numerical Control) machining. It naturally followed that a robotics program would be included. We looked for ways to connect the Delgado CIM program with the existing program at University of Southwestern Louisiana.

It was at this point that the idea emerged to include desktop publishing as a means of writing technical manuals. This discussion led to a decision to enlarge the committee. Three additional faculty were included, two computer/business instructors and one English instructor. These three were charged with determining how the desktop publishing component could also be used for teaching technical writing.

The well-known business scholar and writer, Peter Drucker has often stated that the biggest problem in business is the lack of communication. This problem would exist in our program if we did not provide for teaching those who participate in the program to communicate--to write clear, concise, and accurate statements using the technology of the computers. Once this decision was made, the final proposal was written and submitted to IBM. In December, 1989, a contract was signed by Delgado Community College and IBM to establish a Technology Demonstration Center which will provide high technology training and will provide for teaching technical English on the same equipment. It meant that faculty from a variety of backgrounds and disciplines could and did come together in this endeavor.

The final proposal includes a means for satisfying: (1) the needs of business--a new high technology program will train people for jobs; (2) the needs of the college--IBM has donated substantial technical assistance and equipment that is state-of-the-art and which will provide training on the best equipment available; (3) finally, the needs of students--the program will provide an opportunity for students to study basic English and mathematics on the same equipment which will be used in the work place.

ls are being developed which will relate the English and mathematics content to the manufacturing process. This makes learning more meaningful and gives significance to the need for learning the basics.

The more meaningful education is to the individual, the more likely that person's success will be. Partnerships between educational institutions and businesses are going to escalate over the coming years. It is important to remember that the student, too, must be a partner also.

References

Cross, Caroline, "IBM Looks to Community College Programs to Rescue American Economy", Community College Week, June 19, 1989, p.9.

Drucker, Peter, Frontiers of Management, Truman Talley Books, 1986, 416 pp.

Drucker, Peter, Management, Harper and Row, 576 pp.

_____________, "The CIM in Higher Education Alliance, Working Toward a Common Goal", IBM Corporation, 1989.

LINKING AND THE PROFESSIONS: AN INTERDISCIPLINARY MODEL

Carol A. Moore
Barbara M. Kinach

Introduction

Lesley College has a long tradition of educating women for the teaching profession. Historically, the College has enjoyed a strong reputation in the fields of early childhood and elementary education. The curriculum for education majors has been almost split between education courses and the liberal arts courses required in general education and a liberal arts minor. A hallmark of the professional curriculum has been an emphasis on theory/practice and students spend considerable time in field placements beginning in the freshman year.

The recent flood of undergraduate education critiques such as A Nation at Risk and Integrity in the College Curriculum have generated much debate and revisioning of the undergraduate experience nationwide. Faculties have been asked to reexamine the collection of courses comprising the baccalaureate degree and justify their connectedness and coherence. The tenets of the common body of knowledge are being scrutinized and challenged for myopic misrepresentation and multicultural and feminist voices are rising to demand representation in the canon. While these issues offer significant challenge to the underpinnings of the disciplines and the packaging of those disciplines into an undergraduate curriculum of study, the greater challenge for Lesley has come from the national reform efforts pointing to the liberal arts as the most important core of long-term professional education. The Holmes report, the Carnegie Report - Project 30, and others are demanding bold, creative initiatives to insure a better prepared teaching force for the future. Themes focusing on in-depth study in the liberal arts, enhanced communication and critical thinking skills, knowledge of and sensitivity toward multicultural perspectives have emerged as paramount to reforming teacher education. Additional demands are being placed on the curriculum to integrate educational theory with the liberal arts disciplines and to incorporate vehicles for students to demonstrate competence in applying these theories in their practice. Lastly, we are faced with developing student research skills to imbue the concept of teacher as researcher in the classroom, teacher as contributor to the theory and practice of education.

Carol A. Moore, Dean of the Undergraduate School, Lesley College, 29 Everett Street, Cambridge, MA
Barbara M. Kinach, Special Assistant to the Dean for Curriculum, Lesley College, 29 Everett Street, Cambridge, MA

It was within the context of these enormous challenges that Lesley College undertook the revision of its professional education and liberal arts programs. In doing so, we have developed a four-pronged integrated and interdisciplinary approach to the baccalaureate experience: General Education, Interdisciplinary Liberal Arts Majors, Professional Programs, and Field Experiences.

General Education

Boyer and others have challenged undergraduate education to provide a curricular package which connects and integrates the disciplines into a coherent whole. The traditional distribution model has fostered compartmentalization and fragmentation of general education reducing it to a collection of courses instead of a program of study. Additionally, random sequencing and haphazard leveling of courses add to the lack of coherence and does not speak to the developmental level of student learning. These factors provided the framework within which Lesley's faculty rethought the design of the general education requirements. Faculty held to the positive aspects of the distribution model, namely exposure to a breadth of disciplines; however, choices within disciplines have been prescribed to lend cohesion to the collection of disciplines, while conveying the common body of knowledge. An interdisciplinary humanities course in the freshman year serves as an introductory approach to interdisciplinary modes of thought. A first year course entitled "Leadership and Ethics in the Professions" provides the foundation for integrating liberal arts and professional study as well as laying the ground work for the themes of ethical practice and one's professional responsibility to impact and advance the profession. Seven cross-curricular themes were adopted including writing, critical thinking, oral communication, multicultural perspectives, gender balance, computers as tools, and quantitative reasoning. These cross-curricular themes are viewed as reinforcing liberal learning and essential skills as well as threading coherence through the curriculum. Six credits in the category of global perspectives were added to the general education requirements to highlight multicultural awareness and frame the cross-curricular theme.

Interdisciplinary Majors

Given the complexity of the world, the move toward globalization, the exponential increase in information and information/service era in which we live, the modern propensity for narrow specialization is not surprising. Ironically, however, the information explosion that led us to specialize is now leading us to interconnect. Increasingly, education as well as business is being viewed through the lens of an ecologist who sees the interdependency of knowledge, the disciplines, and environments and their inhabitants. The deeper this ecological perspective penetrates higher education, the more it will challenge the Germanic model of specialized university learning now prevalent in the United States. In its 1985 report, Integrity in the College Curriculum, the Association of American

Colleges criticized the traditional single discipline major for being a bureaucratic arrangement of courses serving department faculty, not students. The emphasis on subject matter often precludes practice in the discipline and results in a lack of knowledge of the discipline's analytic tools and canons of evidence and warrantability. Furthermore, lack of subject matter coherence in the major often results in students' failure to understand the interrelation of knowledge and the organizing concepts, theories, and characteristic questions of the discipline. Specialization and theoretical emphasis then have failed to achieve the depth of understanding they were designed to accomplish in the undergraduate major.

At Lesley, the decision to design interdisciplinary liberal arts majors emerged naturally from the critique of the single discipline major and teacher education. Liberal arts interdisciplinary study was philosophically viewed as the preparation of choice for the early childhood, elementary, and middle level teacher. This decision coincides with the National Middle School Association position paper of 1980. Likewise, research from Canada recommends broad based liberal arts fields with a concentration of at least two subject areas. However, tension points in the curricular reform effort did arise around the philosophy and design of the interdisciplinary major and the optimal balance between liberal and professional study.

Three broad interdisciplinary majors in the humanities, natural sciences, and social sciences were designed. Built on a foundation of discipline study in two related fields, these majors are structured around an interdisciplinary core of three courses taken in the sophomore, junior, and senior years, respectively. Our broad themes are woven throughout the major: history of the discipline; structure and foundational concepts of the discipline; methods of inquiry and standards of evidence in the discipline; and application, problem solving and ethical issues in the discipline. The interdisciplinary core introduces students to the disciplines as ways of knowing and is designed to forge linkages between the student's primary and secondary discipline. The sophomore interdisciplinary course, "Interpretation and Inquiry," builds on the skills of disciplinary inquiry gained in general education and the primary discipline. This course introduces students to the major concepts/theories and methods of inquiry characteristic of the disciplines in the major; writing in the discipline is emphasized. The "Junior Methodology Seminar" is thematic and examines the syntactic aspects of the disciplines in the major. In analyzing the theme from different disciplinary perspectives, students simultaneously examine the underlying presuppositions and standards of evidence and proof operating within these disciplines. After practicing this multi-disciplinary analysis of the theme, students move to interdisciplinary analysis. Disciplinary perspectives in agreement are acknowledged and conflicting perspectives reconciled. The final interdisciplinary analysis is thus a deliberate integration of disciplinary perspectives. The "Senior Interdisciplinary Seminar" is designed as the capstone experience in the major through which students apply the skills of disciplinary and interdisciplinary analysis to a selected topic. This seminar asks students to integrate their professional theory/practice to bridge the liberal arts and the profession.

Professional Programs

In contrast to the lack of coherence prevalent in the undergraduate liberal arts major, professional majors have been criticized for being too narrowly prescribed. Excessive focus on technique and very specialized professional knowledge runs counter to the ecological perspective required in a globalized world. Needed are broad understandings of the world society and the cultures in which professions operate. Building on this premise, professional programs were redesigned to intersect with the interdisciplinary major and forge links between the liberal arts and the professions. Four themes have guided the development of the professional programs: historic development and philosophy of the profession; communication within the profession; social context and dynamic interaction of the profession and society; and theory and practice within the profession. Our continuing curricular efforts are proceeding from the Project 30 recommendation that the history and philosophy of the discipline contributes to the development of students' understanding and practice of the discipline as well as their ability to teach it. Additionally, links between cognitive research and specific subject matter teaching are being explored in pilot courses.

The historic development and philosophy of the profession are captured in an introductory course, "Education: A Case Study Approach." Then, students are introduced to specific education levels and subsequently to literacy and inquiry learning and educational assessment. Liberal arts support courses complement the professional program and the liberal arts interdisciplinary capstone course interdigitates with a professionally oriented project. Concurrently, field placements connect liberal arts and professional theory to practice.

Theory and Practice

Building on the historic theory/practice hallmark of our curriculum, field experiences were designed to enhance the integration of educational and liberal arts theory with practice in the professions. In the first two years, case studies and video tapings are employed as bridge internships for students to gain experience in the application of theory to professional practice. Students are also engaged in observational field work such that they systematically experience different educational levels from pre-school through middle school as well as a variety of educational environments including urban, suburban, and inner city. In the last two years, the placements demand an increasing level of actual practice coupled with a seminar to guide students in the integration of discipline content and application to their practice. Furthermore, through the seminar and projects, students are encouraged to examine their field work in the context of their liberal learning. For example, students learn to apply foundations in psychology and sociology to the cognitive development of school children; the capstone field experience is ultimately integrated with the liberal arts through the senior interdisciplinary seminar.

This approach is viewed as a conceptual model for challenging the compartmentalization of the liberal arts disciplines and the isolation of liberal arts and professional education. As faculty work toward a full development of the components of the model, the themes of coherence and integration continue to frame the discussion.

References

Association of American Colleges. Report of the Project on Redefining the Meaning and Purpose of Baccalaureate Degrees: Integrity in the College Curriculum. Washington, D.C.: The Association, February 1985.

Belenky, Mary Field, Blythe McVicker Clinchy, Nancy Rule Goldberger, and Jill Mattuck Tarule. Women's Ways of Knowing: The Development of Self, Voice, and Mind. New York, NY: Basic Books, Inc., 1986.

Boyer, E.L. College: The Undergraduate Experience in America. New York, NY: Harper and Row, 1987.

Farmer, D.W. Enhancing Student Learning: Emphasizing Essential Competencies in Academic Programs. New York, NY: Kings College, 1988.

Elliot, Murray. "Reconceptualizing Subject-matter studies: An Epistemic Model" an excerpt from "Can Primary Teachers Still be Generalists?" Teaching and Teacher Education: An International Journal of Research and Studies 1(1985): 279-287

Giere, Ronald N. Explaining Science: A Cognitive Approach. Chicago, IL: University of Chicago Press, 1988

Halliburton. "Interdisciplinary Studies," The Modern American College (Arthur W. Chickering and Associates, Ed.) San Francisco, CA: Jossey-Bass, Inc., 1981.

Holmes Group. Tomorrow's Teachers: A Report of the Holmes Group. East Lansing, MI: The Holmes Group, Inc., 1986.

Kolb, David. "Learning Styles and Disciplinary Differences," The Modern American College (Arthur W. Chickering and Associates, Ed.) San Francisco, CA: Jossey-Bass, Inc., 1981.

Livingston, Paisley. Literary Knowledge: Humanistic Inquiry and the Philosophy of Science. Ithaca, NY: Cornell University Press, 1988.

Marsh, Peter (Ed.). Contesting the Boundaries of Liberal and Professional Education: The Syracuse Experiment. Syracuse, NY: Syracuse University Press, 1988.

Murray, Frank B. and Daniel Fallon. The Reform of Teacher Education for the 21st Century: Project 30 Year One Report. Newark, DE: University of Delaware, 1989.

National Commission on Excellence in Education. A Nation At Risk: The Imperative for Education Reform. Washington, D.C.: Department of Education, 1983.

National Institute of Education. Involvement in Learning: Realizing the Potential of American Higher Education. Washington D.C.: Study Group on the Conditions of Excellence in American Higher Education, October 1984.

Newell, William H. Interdisciplinary Undergraduate Programs: A Directory. Oxford, OH: Association of Integrative Studies, 1986.

Newell and Green. "Defining and Teaching Interdisciplinary Studies," Improving College and University Teaching 30 (1981): 23-30.

Perry, William G. Forms of Intellectual and Ethical Development in the College Years: A Scheme. New York, NY: Holt, Rinehart and Winston, Inc., 1970.

Salmon, Wesley C. Scientific Explanation and the Causal Structure of the World. Princeton, NJ: Princeton University Press, 1984.

Schwab, Joseph J. Science, Curriculum, and Liberal Education: Selected Essays. Chicago, IL: University of Chicago Press, 1978.

Stanford, Michael. The Nature of Historical Knowledge. New York, NY: Basil Blackwell, LTD., 1987.

Stark, Joan S. and Malcolm A. Lowther. Strengthening the Ties that Bind: Integrating Undergraduate Liberal and Professional Study. Report of the Professional Preparation Network. Ann Arbor, MI: University of Michigan, 1988.

CONNECTIONS: A UNIVERSITY-CORPORATE PARTNERSHIP IN *EDUCATION*

Richard K. Murray
Anna M. Mancino
Ian Dinmore

Introduction

Connections is a unique, model partnership between an academic institution, a corporation, and its employees who are students at the institution. The partnership was established in response to the needs of the business community and to the changing nature of the student population in America. With non-traditional students soon to become the majority, academic institutions must address the needs of the adult student. One such avenue is sponsorship through an organized, corporate educational program. The Alfred North Whitehead Center at the University of Redlands has developed a program in response to a request from Pacific Telesis. The Connections program proposes a marriage of academic studies, and corporate training and development programs. After satisfactory completion of a preparatory, fifteen-week, college level course, employees of the corporation embark upon a baccalaureate degree program. Students complete the program within four years while they remain employed full time. Classes meet for three, fifteen-week trimesters per year and are offered in an accelerated format. Class acceleration is optimized by combining the training program of the corporation with the academic curriculum of the University.

Connections has met with considerable interest in both experiential learning and corporate sectors. In a period of corporate down-sizing where employee benefits are becoming increasingly important, it is projected that this kind of program could serve as a model for many such partnerships between the corporate and academic worlds.

Richard K. Murray, Assistant Professor, Business and Management, The Alfred North Whitehead Center for Lifelong Learning. The University of Redlands, Redlands, California 92373.
Anna M. Mancino, Chair and Assistant Professor, Liberal Studies, The Alfred North Whitehead Center for Lifelong Learning. The University of Redlands, Redlands, CA 92373.
Ian Dinmore, Assistant Professor, Liberal Studies, The Alfred North Whitehead Center for Lifelong Learning. The University of Redlands, Redlands, CA 92373.

The Alfred North Whitehead Center for Lifelong Learning was established at the University of Redlands in 1976 to provide educational service to adult learners. Upper division degree completion and graduate programs were first offered in the same year. Today the Whitehead Center offers:

Bachelor of Arts Liberal Studies
Bachelor of Science Business and Management
Bachelor of Science Information Systems
Certificate in Education
Master of Arts Liberal Studies
Master of Arts Management
Master of Arts Education
Master of Business Administration

Because of the University's history of quality upper division and graduate work for adult learners, the University of Redlands, through the Whitehead Center, was one of the universities approached by Pacific Telesis, parent company of Pacific Bell, to develop a full baccalaureate degree program for employees with little or no college experience. The Pacific Telesis companies have made a corporate decision that one of the primary ways they will be able to compete in the information market is to have the best educated group of employees of companies competing in the market (Ginn 1989).

Connections: A University Corporate Partnership in Education was developed by the authors, faculty of the Alfred North Whitehead Center at the University of Redlands, in response to Pacific Telesis' need for the development of a curriculum which would:

a. provide a structure whereby individuals with no college credit who were employed on a full-time basis could complete a baccalaureate degree in four academic years;

b. provide a lower division, interdisciplinary, business oriented program providing the broad spectrum of liberal education needs;

c. interface with the organization's training and management development programs;

d. provide a lower division, multi-cultural diversity curriculum which merges with current upper division baccalaureate degree programs currently in existence at the University of Redlands, Alfred North Whitehead Center; and

e. meet all required accreditation standards established by the University of Redlands and by all appropriate external accreditation bodies.

With these objectives in mind the University developed the Connections program to enable employees of an organization to achieve an undergraduate education in about four years while continuing their full-time jobs. Connections begins with a study of self and then explores progressively wider issues of the self in the organization, the self and the organization in the local and national community, and the organization in the world community.

Connections thus becomes more than a name, it is a driving concept of connecting academics to the development efforts of the corporation and theory with application.

Introductory Seminar

"Positive factors used to decide whether to admit and how to admit (provisional or full status) adults are:

1. quality of recent performance in career;
2. participation in civic and community affairs;
3. degree of motivation toward learning;
4. basic skills possessed regardless of the methods by which such skills were attained." (Holtzclaw 1988)

The above statement reflects the findings of current research on standards for adults in an educational program. To that end the University of Redlands has attempted to incorporate these findings into the Connections program. Recognizing that many potential students will not have participated recently in a formal academic experience, the Connections program begins with a fifteen-week preparatory semester whose purpose is to refine the skills required by an adult learner to successfully complete a baccalaureate degree program. The program addresses current research, assessing and refining the student's basic skills in critical thinking, quantitative inquiry, oral and written communications. It also requires the student to develop a life/career/education plan which in turn builds the student's educational motivation. The Introductory Seminar lasts for fifteen-weeks and the class meets twice a week. The University will team teach this element of the program and uses pragmatic, business-related problems as a teaching base. For example, in the quantitative inquiry portion of the class, students are required to explore the geometric concepts of space, volume, and perimeter. Rather than use traditional mathematical approaches, students are to calculate the size of an office, the volume of a storage area required to store a number of file cabinets, and the length of a chain link fence surrounding a parking lot.

In addition to pragmatic application examples the program emphasizes collaborative learning. In most study cases the students are divided into learning groups and may not proceed to the next case until all members of the group have mastered the current concept(s). To encourage this process the group is represented by a member chosen at random to demonstrate the group's learning level. This approach not only encourages team work, a trait required for success in business, it also provides built-in tutoring for students in the area in which they need to improve.

Entrance to the Introductory Seminar requires a high school diploma or equivalent, with a recalculated G.P.A. of 2.65 or above, and two letters of reference discussing the potential student's motivation, career, and civic accomplishments. To be accepted into the baccalaureate portion of the program, one must successfully complete the Introductory Seminar. In addition to faculcy and peer evaluation the Introductory Seminar uses nationally standardized assessment instruments to evaluate and track progress in the academic areas. Since the Introductory Seminar is credit/no credit, the student's main motivation must be successful completion of the course.

The University recognizes that many potential students may have had negative experiences in more traditional educational models, or may feel some trepidation about returning to a formal academic setting as older, adult learners. To this end, the Introductory Seminar is structured to be a supportive, positive, confidence-building learning experience. As mentioned earlier, a pragmatic approach utilizing the familiar and comfortable will be used as an anchor point from which to launch an academic exploration into new concepts. Also mentioned was the use of collaborative learning, where each student adds to the value of the team and other students' learning. The University realized this is not enough: an intrinsic support package must be provided. The first and perhaps most important element is the selection of the faculty with whom the students first interact. These faculty must be motivated themselves, to the point that they can create a learning climate that is contagious. They must understand and be willing to work with students who may have some "educational phobia" leading to resistance or withdrawal and which must be overcome in a gentle, non-threatening, respectful way. Finally, faculty must view education as a lifelong pursuit.

Additional support is provided through the resource material used in the course. It must generate a learning moment in and of itself as the student uses it to prepare for the next class. It should also provide a security blanket so the student feels ready to represent his or her learning team if called upon. At the same time such material should wean students from all security blankets so they build confidence in their own critical thinking abilities. The University believes that a good example of this type of support can be found in the life/career/educational planning process used in the Introductory Seminar. The materials start with some data as to how the planning process can be used. The materials then begin to ask some rather direct, factual questions to help the student begin a success and interest inventory. The process then asks some open-ended conceptual questions and invites the student to seek input and support from significant others. Finally, as decisions are formulated, the process asks the student to take the next level of risk by sharing her or his decisions with her or his learning team, and finally, the whole class. Each of these steps undertaken is in an environment controlled by the course faculty. It is essential that the learning experience of the Introductory Seminar yield successful results for the adult learner, even if it should transpire that a baccalaureate degree is not appropriate for them.

The more traditional types of support experienced in a freshman seminar are also present in the Introductory Seminar. Student services such as counseling, time management, and financial planning are available. The Introductory Seminar does expand these traditional concepts by inviting the student to incorporate his or her significant other(s) in the planning and counseling phases. The University faculty realizes that this four-year commitment being made by the student may significantly, and to some extent, adversely impact family and social relations. This must be fully explored as part of the Introductory Seminar decision-making process to determine if a baccalaureate degree is worth the sacrifices to be made.

Connections: Lower Division Curriculum

Adelman, (1989), stated that the "U.S. Work Force Needs Managers Who Know More than Business."

The recognition that the profession of management is more than business is reflected in such headlines as the above, the Carnegie Study of American Schools of Business, and numerous other reports, articles and professional presentations in the last two years.

In her recent keynote presentation to the American Association of Colleges, Virginia B. Smith expressed the need for interdisciplinary, multi-cultural education more eloquently than the current authors. With the recognition of this trend the University developed as a lower division program that responds as a thematic, interdisciplinary, multi-cultural, concept-building, educational program.

Partnership Courses

In the spirit of adult, experiential learning, the learning, the University recognizes the need of the corporation and its employees to apply theoretical learning to the work place, and to gain college-level credit for such practical applications. There are three elements associated with the delivery of corporate courses for which the University grants credit. These elements, or modules, are the constituent parts of Partnership Courses:

1. Academic modules are theory based,and are taught by University faculty either through the medium of classes or directed studies;

2. Application modules providing practical and technical application opportunities for the student are administered through the organization's developmental activities; and

3. Evaluation modules conducted by the University faculty measure the course objectives to ensure quality control and demonstrate levels of learning.

Not all corporate courses will be integrated into Partnership Courses. Any application modules must, at a minimum, meet or surpass the enabling objectives of the application model as set forth by the University faculty. All Partnership Courses are designed by the University faculty to assure that academic standards are met, but the corporation may request that its developmental courses be considered for acceptance as application modules. Application modules allow the University and the corporation to engage in a partnership to obtain learning objectives which provide students with both the theoretical and experiential framework.

Partnership Courses will be the subject of ongoing scrutiny and evaluation. As such,they will be accepted for up to five years or until the enabling objectives of the module are not met by 80 percent of the class (80 percent of the class fail the evaluation module). Should it occur that the 80 percent rule is not met, the module will be re-evaluated prior to the award of further credit for the application module. Grades in the course are granted by the faculty on the basis of the demonstrated achievement of the enabling objectives and the evaluation module.

A formal written agreement shall be entered into between the University and the organization clearly stating the above duties, responsibilities and privileges.

Example: Introduction to Managerial Computing

Module #1:Academic Theory and Introduction+
Module #2:Application Word Processing*
Module #3:Application Spreadsheet*
Module #4:Dbase*
Module #5:BASIC Programming*
Module #6:Evaluation+

* Modules available for consideration as Partnership options.
+ Modules that MUST be taught by the University's faculty.

Description of Curriculum

The theme "Work in America," was chosen because it was consistent with the academic goals of the University and the objectives of the corporation. Classes meet for three fifteen-week trimesters per year. These fifteen-week trimesters allow for two-to-three week breaks between semesters to prevent student burnout. Each trimester includes two three-unit courses which are six week in length, and one two unit course which is three weeks in length.

The *Connections* curriculum is distinguished by the integration of general education throughout the program, including the major. The *Connections* curriculum encourages students to reflect on the self, the family, work, society, the community, and finally, the world. Throughout the curriculum, students are asked to develop an understanding of the self in the context of living and working in an increasingly global and multi-cultural environment. Students systematically and cumulatively reflect semester by semester upon the relationships between academic disciplines as they apply their learning to their lives.

In the first two years, students carry out a multi-cultural research project which includes basic research models, data collection and reporting of results. This research assignment also requires a period of reflection culminating in a written essay describing how the concepts of the semester build an integrated body of knowledge.

Further supporting this integrative process is the requirement that students maintain and periodically update a journal. The culminating experience in the *Connections* program is an Interdisciplinary Colloquium in which students are required to present a final edit of their journal to demonstrate how they have integrated knowledge acquired in the first two years of study. This colloquium also acts as a bridge to the University's existing upper division degree programs.

Conclusion

The *Connections* program addresses the needs of three constituencies: the adult learner, the corporation and the University. The student/employee is placed into an environment which maximizes the benefits of academic education and corporate development. The corporation not only gains a more valuable human resource, but gains a human development program that is perceived as more valuable because of its connections with the academic institution. The University gains a significant ability to provide service to its adult student population.

References

Adelman, C. (1989, November 12). U.S. Work Force Needs Managers Who Know More Than Business. Los Angeles Times.

Beutel, C. & Go, M. (1989, December). Strategic Education for the Adult Learner; Integrating Training into Academic Curricula. A Presentation to the American Council on Education, Washington, D.C.

Gamson, Z. (1989). Changing the Meaning of Liberal Education. Liberal Education, 75 (5), 10-11.

Ginn, S. (1989, November). Corporate ABC's. Pacific, 8.

Holtzclaw, L. (1988). Flexible Admission Practices for Adult Learners. Lifelong Learning, 11 (6), 9-11.

Smith, C. (1989, April). Investing in Today's Employee. Presented as fourth lecture in series of Alfred North Whitehead Distinguished Lectures in Lifelong Learning, University of Redlands. Redlands, California.

Smith, V. & Smith, D. (1990, January). General Education: The View from the Campus. A Presentation delivered to the Association of American Colleges. San Francisco, California.

Wilkens, M. (1989, April). The Education of a Telesis Manager. Pacific, 8.

COLLABORATION BETWEEN THE UNIVERSITY AND HEALTHCARE: AN OFF-CAMPUS APPROACH

Paul S. Shelton
Clara E. Bell

Introduction

Healthcare and its delivery system has undergone rapid and complex changes in the past decade and will continue to escalate in the 1990's. With this high tech environment and critical personnel shortage innovative approaches must be developed and utilized in meeting both healthcare needs and retention of qualified personnel. One approach has been implemented between a large Midwestern university and a local healthcare facility.

Off-campus classes for working registered nurses desiring a BSN degree were held at the hospital. This alleviated the need for the nurses to travel to campus and contend with restricted parking, time constraints and an academic environment structured for the traditional college students.

As a result of this off-campus program registered nurses at the hospital will receive their BSN degree. These nurses worked full time with most having complex family situations. Key factors have been identified that need to be considered and addressed if this type of program is to be successful.

This off-campus program has demonstrated that the university can come to the people in their own working environment. Some of the educational needs of these working nurses have been met jointly by the university and healthcare facility in a collaborative effort.

Off-Campus Program

Assessment

Healthcare and its delivery system has undergone rapid and complex changes in the past decade and will continue to escalate in the 1990's. According to the Bureau of Labor Statistics seven of the ten fastest growing occupations between 1988 and 2000 will be health related (3). Today, many of these positions are not filled due to a lack of qualified healthcare providers. Registered nurses are the number one shortage included in these statistics.

Paul S. Shelton, Director, Health Education, Home Hospital, 2400 South Street, Lafayette, IN.
Clara E. Bell, Associate Professor, Director Continuing Education, School of Nursing, Purdue University, West Lafayette, IN.

The current nursing shortage began in 1986 and is likely to continue into the next century. Almost all healthcare facilities have numerous openings for entry level positions in nursing. Schools of nursing and healthcare have a joint responsibility in creating a pool of registered nurses to meet both staffing and leadership roles (4).

Most schools of nursing are actively recruiting beginning students and have not meet the needs of the practicing registered nurse. One of the most pressing needs for nurses working in the high tech healthcare environment is continuing education. Continuing education for nursing can take many forms including staff development, specialized workshops/seminars and formalized educational programs.

With this high tech environment and critical personnel shortages innovative approaches must be developed and utilized in meeting healthcare labor needs. Purdue University School of Nursing and Home Hospital, Lafayette, Indiana, created an innovative approach to meet some of the educational needs for practicing registered nurses.

Both institutions decided to investigate the possibility of establishing and off-campus educational program to provide courses for a BSN degree at the hospital. This strategy was advantageous to each institution for the following reasons. Home Hospital viewed the off-campus program as a source of retention of mature skilled nurses, better patient care and to contribute to the concept of nursing as a profession. Purdue University School of Nursing endorsed the program because it meshed with its mission as a land grant university.

Identification

Several preliminary steps were required to be completed before the program could be implemented. These included meetings between the hospital administration, nursing services, and university continuing education to discuss program format and tuition reimbursement.

It was decided that the format of the program should be flexible to accommodate students with multiple levels of basic nursing education and training. This was important because some had transferable college credit while others, who were diploma graduates, lacked formal college courses. The issue of tuition reimbursement from the hospital became paramount if practicing nurses were to attend college courses. A decision was made by hospital administration to assist all nurses who were accepted into the program.

A well advertised orientation and admissions meeting was held at Home Hospital. At this meeting nurses were able to learn about the program and discuss individual educational needs. A survey of interested potential students was conducted and 25 nurses enrolled in the off-campus program.

These nurses all worked full time with most having graduated from a diploma program in nursing. Besides working full time most had complex family situations.

Of key importance to the success of the program was the identification of a liaison between the hospital and the university. This individual had prime responsibility for coordinating all aspects of the off-campus program at the hospital. The university representative was responsible for the academic integrity of the program. Once these preliminary steps had been taken the off-campus program was implemented in 1986.

Implementation

The off-campus program was comprised of four different phases. The first phase consisted of transitional courses that all students were required to complete. Next, challenge exams were given to assess previous knowledge in the areas of medical/surgical, psychosocial and maternal/child nursing.

After completion of these challenge exams the third phase of required courses was introduced. A few of these courses were completed at the university due to equipment and facility accessibility. The fourth phase is still to be introduced. This last phase will consist of three senior level nursing courses.

All nursing classes were offered at the hospital on non-work time. These classes were held in the Education Center of the hospital, which is a separate building on the medical complex. Evening and weekend class times were utilized to allow practicing nurses the opportunity to work full time while attending classes.

Various teaching-learning strategies were used in facilitating the classroom sessions of the program. These strategies included lecture, small group discussions, video tape, counseling and self study. According to Kidd adult teaching strategies need to be considered as an important phase of the learning process. It is relevant for the faculty to learn from the students, learn about their condition, wants and needs, and the very concepts and language that they use (2). This theory was incorporated into the philosophical foundation of the off-campus program.

Evaluation

Since no student has completed the requirements for the BSN degree to date only specific course evaluations and informal overall program evaluations have been conducted (1). These evaluations have identified key components of the program.

Students like the flexible format of being able to work and attend classes concurrently. Attending classes in a familiar environment with peers has been one of the strengths of the program. These students have developed a comradery that is different from the typical undergraduate college student. Another strength of the program, as stated by the students, has been tuition reimbursement from the hospital enabling them to further their education. Admission to the university and registration has been streamlined by the interaction between the hospital and the university.

Classes with laboratory sections have presented difficulties for these nurses. Parking and time allotment cuts into valuable time from the job and family. Some students felt video taped lectures were boring and were difficult to follow. The video taped lecture format prevented questions and discussions about content.

The strengths of the program have been reinforced while the weaknesses have been investigated and modified. Modification continues as each course is offered.

Recommendations

Healthcare agencies are becoming more involved in promoting different types of education activities for its personnel. Recommendations for organizing, conducting and implementing off-campus classes include:

1. Commitment from both the university and healthcare administration to promote and support the concept.

2. Identification of a liaison at the healthcare institution is significant for communication and problem solving on a day-to-day basis.

3. Selection and recruitment of university faculty who are knowledgeable of adult education principles and have experience teaching adult students.

4. Utilization of a variety of teaching-learning strategies to facilitate adult learning and course completion.

5. Recognition of the different needs of the part-time adult student and the full time college student.

The off-campus program described in this paper has demonstrated that the university can come to the people in their own working environment. The educational needs of these registered nurses have been met jointly by the university and healthcare facility in a collaborative endeavor.

References

1. Bell, C. E. & Shelton, P. S. (in press). The role of staff development in promotion BSN programs. Journal of Nursing Staff Development, 6(3).

2. Kidd, J. R. (1973). How adults learn. New York: Association Press, p. 158

3. Lutz, S. (1990, March 5). Hospital's stretch their creativity to motivate workers. Modern Healthcare. pp. 20-24

4. Selby, T. (1990, March). RN supply still below demand. The American Nurse. p.1

DEVELOPING EFFECTIVE COMMUNICATIONS IN THE WORK PLACE FOR THE NON-NATIVE EMPLOYEE

Patricia Traynor
Alice Zenon-Loggins
Carroll Pollock

Background

The decade of the eighties exposed the reality of the literacy gap in the American work place. Due to international competition and technological advancements, the need for basic skills training in reading, English, and math became critical. Moreover, because of global trends in the marketplace and technological changes, many job responsibilities became obsolete while others began to require communication and calculating skills beyond the basics.

Because American industry had been slow to recognize the tremendous need for remediation, American companies are now finding retraining challenges compounded when employees have basic literacy deficiencies. Corporations are having to "catch up" on literacy training before employees can be retrained and "reskilled" to jobs which are more sophisticated, demanding, and complex.

In addition to the major retraining needs of the native English speaking employee, however, many U.S. companies are recognizing the special language training needs of the non-native employees (who speak everything from Korean to Japanese to Spanish). These individuals are faced with added barriers in surviving and retaining employment in the 1990's.

This paper focuses on two major aspects related to a successful, productive community college/corporate partnership aimed at developing effective communications in the work place for non-native employees: (1) the partnership role of the community college and the corporate world in identifying special work place needs and designing on-the-job educational programs; and (2) successful implementation of such a program for non-native employees at two major US companies, Digital Equipment Corporation (DEC) and Hewlett Packard Company (HP) in Colorado Springs.

Patricia Traynor, Division Director, Economic Development Services, Pikes Peak Community College, Colo. Springs, CO
Alice Zenon-Loggins, Instructor/Program Director, Digital Equipment Corporation, Colo. Springs, CO
Carroll Pollock, Author/Instructor, Pikes Peak Community College, Colorado Springs, CO

By the year 2000, workers will need complex skills in order to perform highly skilled job functions. Manufacturing assemblers, for example, will be required to work not only with their hands but also with their brains. A knowledge of statistics and a foreign language (Japanese or German), good interpersonal communication skills, and the ability to work on a team.

Today, these individuals are confronted with new expectations by their supervisors. They are expected to make decisions instead of being passive, work in teams to figure out problems, work more independently of supervisors, read new technical manuals during extra time, write technical reports, communicate with others as members of a team to solve problems, learn new jobs and new skills requirements, and be fluent in English.

How does one proceed to qualify such individuals for future job demands? This was the type of challenge leading to a successful partnership endeavor between Pikes Peak Community College and the corporations in Colorado Springs.

The Community College/Industry Partnership

The partnership between industry and education should be one that identifies creative solutions to work force needs. Within employee oriented corporations, employee growth is a company responsibility. Employees are viewed as a resource; training and educating employees is viewed as an investment, not an expense. Corporate training and education assistance plans often consist of flexible class hours, on-site tutors, in-house skills training and partnerships with community colleges. Companies must either educate and train those they hire, or they must work with schools, colleges and universities to ensure that needed skills are forthcoming.

Such partnerships are not only beneficial to employees, however. Businesses also benefit in that employee morale is improved. Employers believe employees get personal satisfaction when given the opportunity to better themselves. Improved morale means increased productivity. Another benefit is that such partnerships improve public relations for corporations. With involvement in schools within the community, businesses have a greater voice in community affairs, and they gain positive recognition and a reputation for caring about the citizens in the community.

Such partnerships are not only beneficial to businesses, however. School representatives increase their understanding of what is needed in an industry. Therefore, they can better prepare students entering the work place with the necessary skills.

Identifying Special Work Place Needs

The formal process for determining the need for specialized classes (within a total training program) is to first conduct an assessment of the business to determine the "real" employee need. Once this has been done, the actual design of each course within the total program can begin. When the design is completed, a pilot course can be scheduled to ensure the need is met. If the need is not being met, the cycle begins again at the assessment level. This continues until the course meets all needs, and all sequential courses have been completed for the final program outcomes.

Some informal indications of work place needs may include the following: (1) the recognition of direct needs, such as the quantity of products returned for repair or translating a new product design into manufacturing processes; (2) adaptation to new systems skills and moving employees away from specialization; (3) employee requests from a cross-over of various divisions; (4) supervisors' or managers' requests for employee improvement which relate directly to job skill upgrading; (5) transition of employees from Job A to Job H; and (6) retraining for Job A because it now includes elements from Jobs C, D, and J.

In the past, the roles of public education and the private sector have been very defined. Community colleges and universities have all had to work around "stovepipes" to coordinate education and training with industry. Special needs programs of the future will remove these stovepipes, and programs will look somewhat different. Finally, new technology will provide us with more self-paced learning through interactive computer-based training, video work stations, and satellite distance learning.

Designing the on-the-job Educational Program

According to the American Society for Training and Development, annual training and retraining (both formal and informal) has reached $210 billion with only 10-30 percent of employees receiving formal training.

How can community colleges become more responsive to the current and projected training/retraining demands of the industry? One answer has been to reach out to employers directly. Pikes Peak Community College (PPCC) has found a cost-effective way. By consolidating resources and services (without spending more and more money), PPCC has effectively established cohesive partnerships with local businesses and industries through the creation of the Division of Economic Development Services (EDC).

The EDC quickly realized a community college could not keep abreast of rapidly changing work place or work force changes, let alone all job skill shortages and retraining requirements. However, it also realized that there are some approaches which can be implemented to assist companies in softening critical skill shortages among employees and bridging the training gap. One such approach, which has achieved national corporate recognition, was the creation of the PPCC/DEC partnership to provide English language training for non-native employees. Due to its effectiveness the language training program was adopted by HP.

From a "business" aspect there are fundamental elements to be considered when working with corporations to design an effective program. These elements are common every day terms, but take on new dimensions, compound meanings and expectations when working with corporations:

- Consultation
- Comprehensive corporate, plant service needs assessment
- Industry applications and processes
- Innovative contractual arrangements
- Faculty expertise & company "fit"
- Innovative instructional design (two types)
  - --crossover among courses, programs, institutions, and states
  - --interactive computer/software design, satellite
- Responsive on-site delivery
- Employee success and outcome measurement
- Open communications, problem-solving and negotiations
- Confidentiality and commitment
- High level flexibility, credibility and trust

Once these fundamental criteria were met, there were other factors to be considered when PPCC began to develop the customized language training program.

1. Name of the Project: The name changed from English as a Second Language to Effective Communications in the Work Place. This was the first step in overcoming attitudinal barriers.

2. Assessment: It was important to develop an effective assessment measure to test for various levels of reading, writing, spelling, and language (without having to administer three or four sets of pre-tests.) Moreover, from a corporate perspective the assessment had to receive legal approval.

3. Tailoring: Tailoring a fast track program, which combined course content from four or five subjects with work applications, and doing so for various levels of courses for 60-100 employees was essential.

4. Work Place Impact and Visible Results: Supervisor planning, continual interaction/follow-up, on-the-job employee evaluation was crucial.

5. Employee Motivation: The employees' ability to learn and their incentives for participation were major considerations.

6. Right Instructor: The most important and critical factor was identifying the right instructor who had the "right fit." Could an instructor be found who had corporate experience? Could an instructor effectively teach ESL employees within a corporation? Could an instructor incorporate company specific technical content, without a formal technical background? Fortunately an ideal instructor was identified who had a combination of English/ESL teaching experience, expertise and an entrepreneurial spirit.

7. Top Level Support: Without top support by the corporations and PPCC, the project would have failed. Top support was essential in assigning several individuals to the project from DEC and HP as well as PPCC.

High expectations and outcomes were established for the program. All concerned wanted the program to succeed. Consequently, both academic and corporate partners brought flexibility and mutual encouragement to the project.

8. Excellent Learning Environment: Managers and supervisors consistently provided invaluable support to the students and college. Their assistance, sensitivity to students' needs, and caring attitude created an excellent learning environment. Without such an environment,it is doubtful that the program could have succeeded.

9. Dedicated Non-native Employees: The dedication of these employees as workers carried over to the training program. Many were grateful for the opportunity, the attention and the resulting recognition. Others recognized the value to sustaining future jobs within the company. Due to the positive learning displayed within the company environment, many native English speaking employees and supervisors began requesting various English courses for native workers. The ease with which operational problems were resolved and the project was implemented was due to the instructor expertise and dedication, company and college support (in utilizing non-traditional approaches) and the employees, themselves.

Implementing the Program

Meeting the Program Goals: A Major Challenge

In any learning situation there are challenges, i.e., obstacles to overcome in meeting the objectives of the learning task. Two major challenges were faced.

The majority of the non-native employees from both companies had not only been in the country for ten or more years, but most had never had the benefit of any formal English language instruction.

The employees had become used to communicating in an "inter-language," so named by researchers in the field of second language acquisition. This inter-language consists of a language somewhere between the individual's language and the target language (in this case, English). The inter-language signifies that interference from one's native language is still present. If the rules and structures of the student's native language predominate, his/her ability to communicate correctly in English is seriously affected, to the point of being almost incomprehensible at times. The longer a person uses his/her inter-language (without clear and systematic correction), the more established it becomes and the more difficult it is to correct the "bad habits."

Although the College was aware of these challenges and the differences between full-time students in an academic setting and part-time students in the work place, it was decided from the beginning that, to be effective, the class had to take learning seriously and observe the highest standards of academic rigor.

Identifying Levels of English Proficiency

Before classes began, a customized ESL assessment was administered. It tested knowledge of English structure through: (1) written responses to aural questions, (2) written responses to written questions, and (3) a free writing sample explaining why the employee was interested in taking the class. In addition, interviews were conducted with each targeted employee. The tests and interviews revealed three levels of English proficiency.

> LEVEL I: Virtually no proficiency in reading and writing English. Weak proficiency in aural comprehension and oral expression.
>
> LEVEL II: Partial proficiency in reading and writing English. Average proficiency in aural comprehension and oral expression.
>
> LEVEL III: Native-like proficiency in all areas. Because the majority placed into Level II, English language instruction began with the employees on this level for both companies.

The Language Training Program

The general goal of both corporate programs was to decrease the employees' dependence on their native languages in the work place and increase their ability to communicate in English. The attainment of such a goal would improve the chances of participating in additional educational and skills upgrading programs.

Specifically stated, the objectives were : (a) to read with understanding and explain to others manufacturing procedures and other literature pertinent to the successful execution of job tasks; (b) to write well enough to complete, successfully, training courses and job-related tasks each involving the written language; (c) to feel more confident and comfortable when speaking with supervisors, coordinators, and co-workers.

These objectives determined the method of instruction and course content in two major ways. First, to insure maximum success, the classes had to combine interactive instruction in grammar, reading, writing, and speaking. Classes were not purely "grammar" or "writing" classes. Each class session used each skill area to reinforce the other. Second, the course content and materials consisted of (a) customized English as a Second Language material based on information from the work place, (b) carefully selected published ESL materials, and (c) unaltered (unsimplified) literature from the work place.

Students studied for three consecutive thirteen week sessions. The first session used the aforementioned customized ESL grammar lessons and published ESL materials as core material. Initially class activities were primarily those present in any foreign language class. However, the two sessions which followed, consistently utilized unaltered materials from the work place community as instructional texts (i.e., company newsletters, benefits and compensation brochures, unclassified manufacturing procedures, safety information, performance and evaluation forms, robotic training manuals, employee handbooks and so forth). Moreover, classroom activities changed. As students advanced from class to class, learning activities moved away from being primarily language learning exercises and became increasingly work place specific. Assignments and activities included:

- Oral/written reports based on company newsletters
- Written/oral reports on technological, social and policy changes within the company over the years
- Written assignments describing the ideal supervisor/employee
- Class simulation of line meetings
- Role-playing, i.e., assuming the role of the supervisor and completing a "performance Evaluation and Development Plan" on an imaginary employee
- Paper describing their jobs to an imaginary employee
- Oral practice (using grammatical structures under study) in the correct way to express opinions, feelings, ideas when working as a member of a team.

Program Evaluation and Work Place Outcomes

The publication Basic Skills in the Work Place (joint publication of the U.S. Department of Labor and the U.S. Department of Education, 1988) notes that the evaluation of such programs is not easy for the following reasons.

- There are no common criteria for evaluating the performance of adult education programs in general.
- Program staff often do not have the time or the training to conduct the kinds of evaluations that can solidly document results.

Nonetheless, evaluation is important, and the same publication suggests four types/levels of Work Place Literacy Program Evaluations. Results of the "Effective Communications in the Work Place" Program results will be summarized within these categories.

1. Student Reaction: The purpose of student reaction was to obtain some measure of students' feelings about the program and their improvement. They were asked to fill out a Student Improvement Assessment form. All categories (speaking, reading, writing, and general) were rated good to very good. The most significant responses were those which dealt with the student's overall feeling of confidence on the job and willingness to communicate with co-workers. This was particularly important because so much work within corporations is being accomplished in teams. Furthermore, it is significant because as a student's self-confidence (in the ability to tackle learning tasks and succeed) increases, so does the willingness to participate in additional learning situations.

2. Student Learning: The purpose of student learning was to gain a measure of the amount of learning that had occurred in the program. The evaluation of this level was based on two abilities (a) the ability of student to read and understand increasingly difficult course materials as measured by written tests, (b) the ability of the student to communicate effectively in the spoken language as measured by oral examinations and presentations in class. Informal remarks made by supervisors and student's day-to-day communication efforts were also considered.

3. Written Tests: Results on written tests improved dramatically. The best example is the final examination at the end of the program. The exam was based on the feature report "Automation from 'the bottom up' is a sure way to modernize" (Engineers Digest, Sept. 1988). Part II of the exam included student's critical thinking and personal responses to questions such as "Why do you think your company is interested in a method like Computer Integrated Manufacturing?" "Discuss one change in the production process that you have noticed at the company since you have been working there." To have tacked such an article at the start of the language classes would have been impossible.

4. Oral Progress: Oral progress was determined by class presentations, informal comments by supervisors, student perception of such progress, and instructor evaluation of day-to-day progress. Progress in this area was impressive. Many supervisors indicated that they had noticed great improvement in their employees' ability to communicate more correctly and spontaneously.

Advancement within the Corporation

The opportunities that surfaced after the students completed the language program were endless. The program goal was to decrease the employee's dependence on their native language in the work place and increase their ability to communicate in English. Some non-native employees have been promoted to higher level positions. Some gained the confidence to interview for different jobs. Others have gone on to successfully complete more challenging courses. Many developed such a high level of confidence they followed up with written recommendations or notes, suggesting procedural changes, to their supervisors.

Additionally, employees began communicating with co-workers outside of their protective circles. Still others reported very personal achievements, such as being able to write letters (for the first time) to children in college, participating in PTA meetings, or being able to read the newspaper. All in all, the program has proven to be a tremendous benefit to the company through increased employee motivation and productivity.

Concluding Remarks

As successful partnerships continue to develop between corporations and the community college, it will not be surprising to see even more innovative, complex projects flourish. The "Developing Effective Communications in the Work Place" is one project which has not only resulted in high impact benefits for the company, but has led to a positive restructuring of the traditional college program.

We leave you with a quote (shared by a friend from Dana, Corp.):

> "It isn't the mountains up ahead that wear you out; it's the tiny pebble in your shoe."

(Note: The findings in this paper are those of the authors, not official statements of corporate policies.)

References

American Society for Training and Development. (1989). Training America: Learning to work for the 21st century, Alexandria, VA.

Bennett, William, and McLaughlin, Ann (1988). Basic Skills in the Work Place. U.S. Department of Education, U.S. Department of Labor, Washington, D.C.: U.S. Government Printing Office.

DeVenuta, Karin (1990). Education openers. Wall Street Journal, February, R5.

Graham, Ellen (1990). High-Tech training. Wall Street Journal, February, R16-18.

Author. (1988). "Automation from 'bottom up' is sure way to modernize." Engineering Digest, September 1988.

THE COMMUNITY COMMUNICATION CORPS: AN ALLIANCE FOR THE TWENTY-FIRST CENTURY

Stanley P. Witt
Sharon Jordan-Sita

Introduction

In recent months the across-the-curriculum literacy movement has come under critical re-examination. As a result, new ways of dealing with the national literacy crisis are being sought. The Community Communication Corps, sponsored by Pima Community College (Tucson, Arizona), offers one alternative to a literacy movement badly in need of revitalization.

The Need for Revitalization

Nationally, there is much critical debate about the effectiveness of the writing-across-the-curriculum movement (and programs such as reading-across-the-curriculum, speaking-across-the-curriculum, and thinking-across-the-curriculum). Whatever disagreement there may be about the efficacy of such communication skills programs, one thing seems pretty clear to everyone, if we are believe the myriad of reports on the subject. As these reports make clear, there is still a whopping national literacy crisis.

A few years ago one report in particular caught our attention at Pima Community College--caught our attention because it seemed to have significant implications for the community college and its effectiveness in preparing students to enter the job market. This report, a joint publication of the U.S. Department of Labor, the U.S. Department of Education, and the U.S. Department of Commerce, said that employers around the nation are practically unanimous in their concern that the competencies of entry-level workers are deficient in reading, writing, oral communication, and problem solving.

Dr. Stanley P. Witt, Acting Dean of Instruction, Pima Community College, 8202 E. Poinciana Dr., Tucson, AZ 85730

Sharon Jordan-Sita, Faculty, Pima Community College, 8202 E. Poinciana Dr., Tucson, AZ 85730

The findings of this report were echoed in a local survey, a survey conducted of major employers in Southern Arizona (which is the geographic region served by Pima Community College). This survey pointed out that while major employers gave overall approval to the local educational system, seventy-five percent of all negative comments related to students having poor communication skills. The survey indicated that the greatest need among entry-level job applicants was not so much in technical education as might have been expected, but in basic communication skills. This finding was borne out in an editorial in a major local newspaper which reported that sixty-two percent of job applicants failed to secure employment because they could not fill out an application properly.

Traditional Solutions

Pima Community College has attempted to address the crisis variously. For the past eight years, the school has acted in tandem with several high schools and the University of Arizona to attack the problem through a joint writing- and speaking-across-the- curriculum effort, an effort previously supported by a sizable FIPSE (Fund for the Improvement of Postsecondary Education) grant. Despite the successes of this local effort, our traditional program did not adequately address the widespread need for the development of real-world communication skills. Like most traditional programs, ours did not place enough emphasis on functional literacy--on that which enables students to succeed outside an academic setting.

Another problem with the earlier program (and with most traditional programs, we might add) had to do with the fact that we did not promote enough communication skills. And again, our program, like most traditional programs, did not reach down far enough into the educational system to engage students at middle schools (the point where integrative learning begins to fragment). And, finally, our program embodied an unhealthy assumption common to traditional programs in supposing that literacy was only a campus-wide responsibility. Concerning this latter point, we now recognize that responsibility for literacy must be accepted by the entire local community because the crisis has grown too formidable for schools alone to remediate. This is especially true of communities like Tucson where in some schools minority enrollment accounts for upwards of ninety percent of the population.

The Corps Concept

Locally we have begun to attack these problems through the Community Communication Corps, which is now in its fifth semester. Sponsored by Pima Community College, the Corps is a partnership between teachers and representatives from business and industry in the promotion of communication skills across the curriculum. The Corps premises its existence on the fact that communication skills are essential to success in nearly every career, in nearly every enterprise, in nearly every school subject, and in nearly *every classroom*. The Corps believes, therefore, that communication skills, which are taught regularly across the curriculum in primary and elementary schools, should also be taught across the curriculum from middle schools through college.

Three major differences distinguish the Corps from traditional across-the-curriculum approaches: (1) the use of the business community as a resource in the promotion of communication skills, a resource that is new, exciting, and abundant; (2) the promotion of five communication skills (instead of one or two): reading, writing, speaking, listening, and critical thinking (which is now considered a communication skill because it is used as a measure of literacy); (3) and a pedagogy which teaches functional (or real-world) literacy as well as academic literacy.

Organizing the Corps

Here's how the Corps began. Utilizing our connections with feeder schools developed during our earlier literacy project, we recruited faculty and representatives from local business. Referred to as Business Partners in Education (we call them BPEs for short), Corps participants from business and industry represent much of Tucson's commercial activity. They come from large corporations, small businesses, wholesalers and retailers, manufacturing firms, and public service agencies.

These business partners, who either volunteer their time or receive release time from their employer, are not expected to have degrees in English, speech, or reading; they need only a reasonable facility in one or more of the communication skills being promoted. Having met this requirement, BPEs are paired with faculty across the disciplines from Pima Community College and from the feeder high schools and middle schools where literacy levels are lowest (most target schools have large minority populations) and where career-oriented students are in greatest abundance.

Corps Activities

Paired into teaching teams, business partners and teachers meet in workshops with language arts specialists to prepare communication skills units for classroom presentation. These units represent everything from role playing to mock interviews to written scenarios to oral summaries to nonverbal communication to resumes to formal speeches and impromptu debates. In all, there is a good deal of emphasis on problem solving strategies and on exercises in critical thinking, with an occasional activity concentrating on critical listening or on critical reading.

The following example was a Corps activity prepared for a class in human development at Pima Community College. The class, called "Women in Progress," enrolls re-entry type women--typically single parents or displaced homemakers planning to enter the work place (some for the first time) as soon as they complete their programs of study and/or obtain marketable job skills. In fact, many are in desperate need to find at least some sort of part-time work to remain in school.

In considering the needs of this group, teaching team members decided that a basic workshop in preparing a resume, completing application forms, and interviewing techniques would be appropriate. The BPE, who works for Pima County government, supplied job application forms along with a listing of current job openings. During classroom activities, students were given information about employment opportunities, how to submit a good application and resume, how to dress for that all-important job interview, and tips for handling that interview. As part of the workshop, students were required to "dress up" as though actually applying for the position desired. The teaching team discussed the proper "uniform" for the particular job interviews and then critiqued each student's attire. At an appropriate juncture, students were given a homework assignment which required them to prepare an application blank with an attached resume. The teaching team provided in-depth critique of the applications and required students to re-submit corrected applications.

As a result of this exercise, some students actually obtained employment on a temporary basis. Even those who were less fortunate discovered that their application forms are often the only initial means by which a prospective employer can form an image about them and make a judgment about possibly hiring them. Because there is so much competition for jobs, these students realized how very important it is to learn to communicate through the writing medium.

Students were not the only beneficiaries of this activity. One important lesson learned by the volunteer teacher was the great need of students to learn basic "survival" skills. As the instructress noted in her report to the Corps, "Many students are seriously lacking in fundamental knowledge about how to even start a successful job-hunting plan. Out of my class of twenty-four students, only three turned in applications that the BPE and I considered to be neat and complete enough for a prospective employer to even contemplate employing them. The students themselves were surprised at the number of errors in their applications and then grateful that we had done such an in-depth critique. As one student put it, 'I can understand now why I've had such a hard time even getting called in for an interview.'"

As should be evident from the example just discussed, owing to the nature of their involvement, Corps business partners are not merely guest speakers or presenters; they are integrated into classroom activities, participating in discussion sessions and assisting in the evaluation of relevant assignments. Again, it is important to note that teams strive to balance academic literacy and functional literacy by using activities which have discernible relevance to course content but which are also grounded in the working world.

The functional aspect of literacy is especially enhanced in classes in which business partners, assisting in the evaluation of assignments, stress the real-world necessity of correct spelling and punctuation, organization and sequencing of ideas, clarity and polish. Students are astonished at the attention business partners give to these principles. And this brings us to the most promising contribution of the Corps: its potentiality to improve student attitudes towards communication skills. In fact, teaching teams can effect attitudinal changes in one or two classroom visits, changes which teachers alone have been unable to inspire in years of classroom toil. The truth is, when student attitudes undergo favorable change, the change contributes to enhanced learning. Thus, the value of having the business partner in the classroom lies in reshaping student attitudes. The old adage "Seeing is believing" takes on new meaning, one vividly reflected in altered student attitudes.

Evaluation and Institutionalization

Before describing our attempts to evaluate Corps activities, we should like to point our that project activities are designed to impact upon students in two ways: first, upon student attitudes about the importance of communications skills and, second, upon student improvement in communication skills proficiency, particularly in functional or real-world proficiency. Accordingly, in order to measure the impact upon student attitudes, each semester appropriate student surveys are tabulated and distributed for evaluation and program review.

The results have been gratifying. Last year, project evaluations, based on sixty-four teaching teams, working with approximately 1300 students, confirmed the beneficial effects of the BPE in the classroom. Virtually every participating faculty and BPE gave enthusiastic approval to the experiment, and seventy-seven percent of participating students deemed their Corps learning experience to be substantially worthwhile.

With respect to the actual measuring of student proficiency (real-world proficiency), the Corps has less available resources, particularly for administering formalized pre- and post-tests or for tracking students into the real-world job market. Nevertheless, all teaching teams do some type of individualized student evaluation. Teachers and BPEs are also asked to complete formal project evaluations and submit them to the Corps director for tabulation and dissemination.

Corps Funding

A word or two now about Corps funding. The Corps is supported by moneys provided by each of the college's three brick-and-mortar campuses. An effort is now underway to fund the entire project from a single budget line at the District level--a fact which points to the popularity of the Corps. A principal mechanism for increasing our economic and human resources will be the establishment of a local booster club, the Community

Communication Club of Tucson. The Communication Club will be a service organization whose purpose will be to provide and maintain a roster of Corps business partners and teachers, and to create some type of scholarship program for students and, perhaps, an outstanding teaching team award. In this fashion it is hoped that the Corps will become a permanent fixture in the local educational landscape.

Other methods of institutionalizing key Corps elements have been developed as well. Due to the persistent lobbying of members of the earlier literacy project, Pima Community College now awards a kind of merit pay (called Professional Growth pay) to full-time faculty who enroll in the program. Part-time faculty are paid by stipends each semester.

Conclusion

Avoiding many of the pitfalls of traditional across-the-curriculum programs, the Corps offers a bold new approach for preparing students to meet the twenty- first century with real-world communication skills. Almost without exception, teachers who participate in the Corps express an excitement about the educational process that they have not felt in a long time. They like the newness and freshness of an approach which strives to maintain pedagogical integrity while interfacing organically with the community. And, of course, the community's students are the principal beneficiaries of Corps activities. These students learn, from people they are apparently quite willing to believe, not only the crucial importance of communication proficiency as a condition for survival in the world outside, but also valuable instruction in developing the very skills which will enable them to survive. As one high school math teacher observed, using "real-world" activities heightened her students' interest. "Textbook situations," she wrote, "are not adequate preparations for the future."

Another advantage offered by the Corps has to do with the fact that its helps to foster healthy community relations, particularly among the community's schools and businesses by dispelling ingrained prejudices and traditional antagonisms between educators and business people. The Corps concept also represents a shared vision between business and education with respect to what educators are trying to accomplish. Having educators and business people sitting around the same table discussing and grading student assignments can give added integrity, meaning, and commitment to the educational process.

Whether the Corps will survive over the long run is an open question, of course, but one thing seems pretty clear. The global needs of students entering the twenty-first century will demand more effective approaches to the acquisition of communication skills than the traditional approaches currently being used. The Corps, then, offers one alternative to a literacy movement badly in need of rejuvenation.

PHILOSOPHICAL ISSUES IN NON-TRADITIONAL/INTERDISCIPLINARY EDUCATION

EDUCATIONAL VANITY: THE INTERDISCIPLINARY MYTH

David W. Black

Interdisciplinary education abounds. In the eyes of some particularly exuberant theorists, interdisciplinary study has become the icon of curricular excellence. In recent years, the Association of American Colleges' reports on *Integrity in the College Curriculum* (1985) and *A New Vitality in General Education* (1988), Ernest Boyer's report for the Carnegie Foundation on *College: The Undergraduate Experience in America* (1987), and the National Institute of Education's booklet on *Involvement in Learning* (1984) have all argued, with varying degrees of insistence, that interdisciplinary education, in some form or another, will add luster to our apparently tarnished conception of liberal learning. These various reports claim that general education, if it is going to be requisite and holistic, must do more than simply introduce the student to a spectrum of independent and seemingly unconnected disciplines; a liberal arts education must map the numerous pathways that run between and among our fields of study.

There are intelligent reasons behind this view. The reports mentioned above are significant in their insight as well as their impact. These reports understand that there is an epistemological difference between general and specialized education; that is, a course in one's major differs from a general education course not only in the *degree* but in the *kind* of knowledge conveyed. Instead of offering a tour of the inner sanctum, a general education course should help a student find the door; that is, general education courses are inherently interdisciplinary in the sense that they offer not merely a knowledge of a given discipline's methods and insights but a knowledge of the peripheral questions and presuppositions that get one in and out of a particular field of study.

But is the standard interdisciplinary course--that is, the hybrid course, which is often marked by some method of contrast and comparison, or which tries to mold some new unity by blending the state-of-the-art theories of various scholars--is this kind of course the proper way to handle the "epistemological difference"? In other words, might there be a better means for guiding our students through the links and crevices of our assorted disciplines, a means which--instead of bringing together the spirit and techniques of full-grown disciplines--captures the genealogy of knowledge by surveying in some systematic manner the birth and subsequent evolution of the questions that various scholars ask. Perhaps the aims of education would be better served by arranging the disciplines in a kind of epistemological history, whereby students are shown how one

---

David W. Black, Associate Professor of Philosophy, University of Scranton, Scranton, PA 18510

question becomes two and how two questions become four and how this proliferation and subsequent fragmentation of intellectual questions in itself gives rise to the diversity of disciplines. In other words, perhaps the general education core should do more than simply unite the disciplines through the convoluted channels of contemporary thought; perhaps it should uncover the fundamental solidarity of our learning by exposing the common roots of human inquiry, by rehearsing the questions and challenges that the disciplines shared in their infancy.

In effect, I believe modern educators have made a choice. We seem to work at the top of our network of knowledge rather than at the bottom. We seem to think that it is easier to unify the branches of knowledge by bending the twigs to one another than by studying the bough and trunk of our educational tree. And I believe that we have made this choice due to a kind of educational vanity, a kind of conceit that grows out of the fact that we are committed more to a celebration of "where we are" than to a thorough review of "how we got to our present locale." With perfectly straight faces, we assert that the truth, meaning, or value of our knowledge can be accurately assessed apart from the nuance of its evolution. We tend to flaunt the rare and estimable status of our current inquiries rather than pay our debt to the intellectual history that got us our gains. In short, we are interested more in the *advancement* of knowledge than in the *origin* of our achievements. I think that it is this educational vanity, this arrogant choice, that prevents us from uncovering the full and genuine unity of the traditional disciplines, that prevents us from establishing a unique yet honest picture of general education, that prevents us from pursuing a more humble conception of interdisciplinary learning.

Instead of offering a sequence of contrived interdisciplinary courses, perhaps we should strive to create a museum of academic taxonomy. In other words, one way to pursue interdisciplinary education would involve nothing more than putting the various disciplines, the various predispositions, in some kind of genetically meaningful placement. The sequence of general education would reveal, would in fact model, the phylum, the order, the families, the genera, the species of academia; that is, students would study academic questions in their historical order; which means students would experience the questions, not in some artificial or heuristic juxtaposition, but in a developmental pattern that approximates the natural order in which these questions first arose for human consciousness. This process would in itself remove a substantial measure of arrogance in the sense that students would see that contemporary theory, however elegant and grand, owns no privileged position on the taxonomic chart. Students would understand how contemporary science grew from certain philosophical questions which in turn grew from certain mythological topoi which in turn grew from certain theological dispositions. Students would see how the rhetoric of human inquiry grew out of the various symbolizing capacities of mind, and they would see how these various symbols form the structure and the rationale of each other. Students would understand how the unique and certain output of a given discipline often becomes the primary input for a new field of study.

In this regard, it is important that we see the limits of our intellectual heroes. Plato's insights were not possible without Homer. Newton implies Descartes. Yet it is wrong to bring these thinkers together in one sense only; that is, we might bring Heidegger into a dialogue with Einstein by building an involved and clever bridge across a wide and awesome river. But it is also important to chart the twists of the river itself, to paddle upstream from the river's mouth to its source. Indeed, if my readers will indulge my river analogy, our refusal to explore the origins of our ideas makes the trip from the sciences to the humanities especially abstruse; that is, it takes great feats of engineering to cross a river at its mouth; yet a giant footstep will get one across the river's source. While the formidable feats of bridge-building should perhaps be pursued for their own merit and elegance, if we do not on occasion return to the river's source, we will never show our students that the river does indeed narrow and that there are means, as fundamental as a footstep, by which one can with minimal effort and fanfare manage the synergy of the disciplines. Interdisciplinary education need not resort to the rigmarole it often employs if we prepare students properly by organizing their educational experience in line with the taxonomy of the disciplines.

In effect, there is an interdisciplinary dependence that is almost wholly taxonomic; that is, one could argue that one must study theology to find the starting-point and orientation of mythology and that one must study mythology to get an angle on the early premises of cosmology and physics. Students would see how the insights of certain disciplines were made possible by the ground-breaking work of other, seemingly different disciplines. Arrogance would dissipate as each discipline is put in its place.

-I-

I have argued in another paper that the main problem with contemporary education lies in the fact that it has finally "grown up" (Black, 112). The problem with growing-up, of course, does not lie in the general nature of being a grown-up; nor does it lie in what one gains as an adult. The problem lies in the fact that if one is to grow up in a proper fashion, then one must part company with certain things of value; one must jettison certain aspects of one's childhood in order to be an effective adult. This harbors a problem because the inevitable attempt to leave one's childhood behind can become thoroughgoing. We might give up our sense of untutored playfulness. We might trade our imagination for a set of recipes and techniques. We might, in fact, lose much of our memory of childhood. Or perhaps, even worse, we might retain our memory but find that our grand successes as an adult have come to taint our image of childhood, and we might thereby come to view much of our childhood activity as silly or naive.

This is the vanity of adulthood. Arrogance is a grown-up problem. Most of us look at our childhood as a happy time, a peaceful experience; but we do not always give childhood its due. Caught in the polyester trappings of adult life, we overlook the fact that the more naive and imaginative pursuits of childhood helped form the demeanor and direction of our grown-up concerns. We tend to associate childhood with a felicitous innocence that, while pleasant and unique, remains rife with naivete. We look at childhood as a time of learning and growth--we examine childhood so we might discern patterns of development--but we rarely study the activities of childhood as if they presented grand insights in and of themselves. We often say: " I wish I was a kid again." But we say this not because we view the dispositions of childhood as responsible or truthful but because we wish to escape the press of responsibility and truth on which our over-starched adult life depends.

Educators do much the same thing. We have developed techniques and insights that exceed our predecessors dreams. But the dazzling nature of grown-up theory can overwhelm the technological educator. We become so preoccupied with the minutiae of contemporary research that we miss some of the truths our history holds. We need instead to generate a comprehensive picture of human learning by focusing, not merely on the late-breaking discoveries, but on the abstractable patterns and mutations that are present in the general sweep of academic history. The eighteenth-century philosopher Giambattista Vico once remarked: ". . . even if you know more than the Ancients in some fields, you should not know less in others. You should make use of a method by which you can acquire, on the whole, more knowledge than the Ancients, and, being aware of the shortcomings of ancient methods of study, you may endure the unavoidable inconveniences of our own" (Vico, 5).

It is not that contemporary educators deny the value of history. In one sense, curricular theorists must be counted among history's greatest friends. But they argue on behalf of history in a somewhat patronizing tone; that is, contemporary educators might take seriously the study of history; but they rarely place history near the center of their concerns. Educators believe that the past is important to study. They believe that we can gain a sense of ourselves and of our futures by reviewing the successes and failures of the past. But this view of history harbors a modest disdain for the "childhood of humanity" because it undersells the pedagogical force of history. It fails to see how history is itself a source of curricular design. Therefore, if interdisciplinary education is going to take root, we must do more than simply find a place for history within the curriculum; we must view history as a guide to curricular structure itself. We must consider the value of not only history but historicism.

For the historicist, history is not simply an important aspect of education; it provides within itself the principal model of curricular development. In this context, history reveals the most honest and coherent patterns of human thought in the sense that it reveals the natural, and perhaps the most genuine, connections between and among the various fields of study. Instead of arranging and combining our courses in respect to their "adult" methods alone, we should also consider how the universal starting-points of our academic "childhood" reveal the common origins of our now uncommon methods. For the curricular historicist, history _is_ the paradigm of taxonomic curriculum. The lessons of history are not merely a part of the interdisciplinary curriculum; they are the form and matter of the curriculum itself.

What I am calling "curricular historicism" produces a pedagogical synergy because it studies not disciplines but processes; and as the philosopher of history R.G. Collingwood remarks: " processes are things which do not begin and end but turn into one another" (Collingwood, 97-98). A truly holistic education should do more than simply demonstrate how certain questions or issues come to bear on several different fields of study--it should do more than show how there are relationships between the methods of different disciplines--it should also show how the disciplines "turn into one another." To return to our river analogy, interdisciplinary education must chart the entire process; it must map the back flow of the river from delta to source. If we as arrogant adults spend all of our time building a set of self-indulgent bridges at the delta, we will never locate the wellspring of interdisciplinary education. We might uncover some splendid connectives, but we will never expose our students to the sense of drama, to the sense of passion, that one feels when one sees through the aid of a taxonomic curriculum the principal energy, the fundamental curiosity, that drives the process of question-asking itself. For even the contrived interdisciplinary connections we now effect, even our present models of cross-over learning, are possible only because the undercurrents that support the historical dialectic and continuity of our thought continue their indirect influence by means of the traditions they represent.

A learning tradition stands somewhere between an academic discipline and the taxonomic sense of process endemic to question-asking. A tradition represents a given portion of our historical development; it reflects its own values, logic, and disposition to empirical life; but it is transdisciplinary in scope. Within Western history alone, one can speak, for example, of the Greek tradition, the tradition of the Enlightenment, the scope of Renaissance Humanism, or the Postmodern tradition. A genetically-formed curriculum would do more than present or categorize these traditions; it would employ these traditions dramatically, offering each student an opportunity to think her or his way through the traditions. In a historicist curriculum, students would not simply study the traditions; they would retrace the steps of the traditions, bringing their own life to the traditions.

I believe, therefore, that we ought to exercise caution when we speak of non-traditional education. Although innovation and a spirit of adventure are curricular virtues, we must guard against the enthusiasm hidden in our vanity; that is, we must be especially careful whenever we juxtapose the words "interdisciplinary" and "non-traditional." For in the sense described above, in the sense of a taxonomic study of common roots, interdisciplinary education is inherently traditional. Thus, we must attach intelligent meanings to the potentially dangerous term "non-traditional." We cannot let our vanity get the best of us. Non-traditional must not become synonymous with anti-traditional; that is, no matter how we develop our non-traditional models of learning--no matter how innovative and special our curriculum becomes--we cannot produce a completely honest or rich sense of interdisciplinary education if our curricular models are tradition-denying.

If we wish to take learning seriously, we need to make our teaching dynamic; and I am suggesting that one effective way to do this is to stop fighting the natural pull of the past and let the traditions of our academic history write our curricular script. We fret over the design of the curriculum. We group courses by various categories or by way of certain sequences. We try to create balance by exposing students to opposing points of view. Yet in this process we too often act as if we can simply trade and combine the knowledge and insights of two or more full-grown fields of study without first inspecting the common thought patterns that provide an orientation for the disciplines involved. From a purely pedagogical standpoint, the most important links between the disciplines are revealed in the organic process they together create, not in the abstract barter and exchange that defines so much of our current interdisciplinary technique.

-II-

In sum, if one wishes to address the "epistemological difference" described above, then there are at least three distinct areas of pedagogical concern: disciplines, processes, and traditions. We must pursue not merely the standardized interdisciplinary models; we must also develop intertraditional modes of learning that expose students to the organic processes that empower the disciplines we teach. Students need to understand the logic and flow of the tradition that holds together Leonardo da Vinci, the painter, with Leonardo da Vinci, the scientist. And students must retrace the process that binds one tradition to the next. The Enlightenment tradition created, for example, certain dispositions to machinery; these dispositions were in part made possible by the Cartesian tradition, which produced a set of presuppositions about the mechanical nature of the human soul.

The very idea of interdisciplinary education must be widened so it might transcend the vanity of our age. The phylum, the order, the families of our educational tree can thus be brought together, and can be in some manner unified, at three distinct levels:

(1) Process - The ordering of the core curriculum in a genetic manner, allowing one tradition to flow naturally from another by showing how contemporary technological advances have a distant kinship with non-technological questions. Students should perhaps begin their freshman year with the study of mythology and magic, not psychology and mathematics. These first year students would see how human symbolism begins in a non-discursive manner. Sophomores should perhaps study singing and rhetoric, learning our how non-discursive symbolism splits into figurative and literal usage.

(2) Tradition - The sub-ordering of the curriculum that shows how symbolism crystallizes into various "transcendental" patterns and similarly shows how these patterns form and influence one another. By reliving the movement of a tradition, students would see how the general logic and spirit of a given epoch adds a significant measure of unity to the various disciplines that co-exist in that age.

(3) Discipline - The interactive dialogue between and among disciplines which shows their usefulness to one another, which reveals some of their shared methods, which brings full-grown theories into unity with one another, and which also allows a student a genuine chance to see how one discipline directly challenges another.

I think that contemporary educators have accomplished much in respect to level three but have done far less to preserve levels one and two. Perhaps levels one and two require too much from a four or five year curriculum. There may be a practical problem here, and practical problems cannot be taken lightly. But I think the general point remains that, no matter how much or how little we adopt the strategies of levels one and two, our curriculum will be the better for it. I am aware that I have outlined a daunting task. But those people whose adventurous spirit propels them into the already precarious world of non-traditional education--those people whose love for innovation and learning lifts them to the transcendental plane of interdisciplinary study--those people surely have the gumption.

References

Association of American Colleges. A New Vitality in General Education. Washington, D.C.: AAC, 1988.

---. Integrity in the College Curriculum. Washington, D.C.: AAC, 1985.

Black, David W. "Vico, Education, and Childhood." Educational Theory 34.2 (1984): 103-112.

Boyer, Ernest. College: The Undergraduate Experience in America. New York: Harper, 1987.

Collingwood, R.G. An Autobiography. Oxford UP, 1939.

National Institute of Education. Involvement in Learning: Realizing the Potential of American Higher Education. Washington, D.C.: NIE, 1984.

Vico, Giambattista. On the Study Methods of Our Time. trans. Elio Gianturco. Indianapolis: Bobbs, 1965.

INTERDISCIPLINARITY FOR TODAY'S WORLD

Mary E. Clark

Introduction

It is marvelous to be asked to respond to the question: "What if the University took learning seriously?" The prior question, of course, is "What is learning?" And here is where the obfuscation lies -- for "learning" is almost always defined as preparation for "individual growth," or "citizenship," or "critical thinking" -- as though such phrases actually had some concrete relationship to the lives of students and the world they live in.

It is my premise that most university "thought education" borders on intellectual humbug. It is constrained by the underlying assumptions of a multitude of historical disciplines -- which seldom if ever bother to inquire into their neighbors' assumptions. And so we construct for our students a Humpty-Dumpty universe composed of shattered fragments of facts, knowledge, and meaning, which can never be put together, either by faculty or students, into a comprehensible whole.

In this paper I shall show how two contemporary areas of concern that all university graduates should know about -- economic development and conflict resolution -- can only be understood by drawing on a wide spectrum of disciplines, many of which are often ignored today. Furthermore, when such integration is carried out, it reveals to both teachers and students the underlying weaknesses and inconsistencies of the separate disciplines, thus forcing the academy to rethink its own legitimizing logic.

Failure of Disciplines in Addressing Contemporary Global Issues

In Western culture, scholars and professionals alike tend to be specialists, trained to think in highly focused ways about ever narrower parts of the universe. No one knows this better than sick patients who must learn to diagnose their own illness before deciding which specialist to consult. General diagnosticians are a dying breed, following in the footsteps of the old family doctor who used to make housecalls. At the national and international levels, major decisions are based more and more on the advice of political theoreticians and economists. Industry relies more and more on technical experts and engineers. And the universities where all these specialists are incubated and hatched are themselves little more than amorphous aggregates of individuals, highly competent in isolated

---

Mary E. Clark, Professor of Biology, San Diego State University, San Diego, CA 92182

compartments of intellectual specialization but unable to communicate with each other. It is a Tower of Babel, in need of a Rosetta Stone. Despite all the massive power of modern-day industrial societies, their enormous impact on the planet, and their ever-increasing rates of technical and social change, no one is in charge nor even has a very clear sense of whether the direction of change is wise. There is a kind of blind momentum that is widely accepted as "inevitable."

This blindness stems from a second kind of specialization -- namely, cultural specialization. Not only is Western society narrowly specialized internally; it is also unaware that this tendency to specialization -- along with many other culturally shared assumptions and beliefs -- is not a "natural" consequence of the human condition and its evolution, but rather results from its own highly selected view of reality. Yet so confident is the West in its own myopic vision of the universe that it not only regards itself as "better" than other worldviews (a point of view characteristic of most cultures), but also as in some sense evolutionarily more advanced. This combination leads to a sense of uniquely and inevitably better, which perhaps prevents Westerners more than any other people from exploring the possibilities of other ways of visioning the universe and the place of humans in it.

This double-barrelled short-sightedness of the Western vision -- its intellectually fragmented reductiveness, and its presumption of its own evolutionary success -- has been coupled with its rosy global projection of itself via electronic satellites to create an extremely dangerous set of expectations for the human species as a whole. Unaware of the environmental and cultural short-comings of the North, the South (or at least its elites) has set out to mimic it. This situation has served to reinforce Northern academics and policy-makers alike, that their world vision is indeed correct. And so, as the world drifts ineluctably into multiple crises, those most able to correct its course confidently continue to steer in the same direction. We thus see any number of emerging global issues -- each of crisis proportions -- that various "experts" assure us will be overcome by continuing faith in their wisdom and in the inventiveness and adaptiveness of the human species.

Among the crises magically to be overcome are population growth, limits on energy resources, the threat of a nuclear holocaust, global inequality, and environmental destruction. Yet if we look at any one of these crises and ask: "Which group of specialists knows how to cure this problem?" we immediately recognize how insufficient the specialists are. Not only will solutions not be found within one discipline; they are not likely to be found simply by integrating disciplines -- although this can alert us to internal inconsistencies in the current Western worldview. Solutions will in fact require critiquing the Western worldview itself. This I shall attempt to show with two examples.

Two Critical Global Issues

Almost any of the central global issues cited above -- or variants of them -- would serve to illustrate the intellectual inadequacy of the overall Western worldview. This is because these issues are deeply interwoven with one another and ultimately require new ways of thinking. I have chosen two issues, Third World development and conflict resolution, as two convergent examples. Of necessity, each is treated in almost telegraphic style, making use of broad generalizations.

Third World Development

The general assumptions about how to create global economic equity have been the following: Earth's resources, although not infinite, can be expanded to provide the entire global population, even if it grows to ten billion, with a standard of living similar to that in the North. This can best be done by direct transfer of the latest Western-type infrastructures and technologies, not only in manufacturing, but also in agriculture and forestry. The expertise necessary will come from foreign advisors and engineers, and from Western-trained local specialists. The whole process will be financed mainly by outside investment, with the expectation that profits from trade will be sufficient not only to pay off loans plus interest, but to reinvest in further local development. Eventually locally produced wealth will begin to improve the living standards of all segments of the developing nation.

After three or more decades of "development," almost none of the Third World countries is well on its way to the expected goal. Only South Korea and Taiwan, both with a high level of literacy at the outset, and with authoritarian governments supported by the West and receiving an infusion of military-related wealth, have been "successful." Others, such as Brazil and Mexico, began as "growth miracles," only to collapse into debt, declining living standards, burgeoning urban populations, run-away inflation and widespread environmental destruction. Although most are temporarily free of violent military dictatorships, internal instability remains high, and elected governments still rely heavily on police and military to maintain order. The West is still demanding that its loans be repaid, albeit at a slower rate, by further lowering of living standards ("belt-tightening") and by transfer of extractable wealth (agricultural, forest, and mineral resources) from the poor South to the rich North. A grim picture, indeed. The fuse on the global powder keg is clearly shortening. What went wrong?

The answer is that nearly every Western assumption about economic growth was incorrect. Earth's resources are far from infinite. Access into arid lands [Berkes and Farvar, 1989] and into rainforests [Suzuki, 1989] have permitted destruction of the subsistence base, lowering, not increasing their ability to support human populations. Even the North, supposedly "ahead," is not living sustainably. It depends on fossil fuels, mostly imported, to maintain itself and is making no serious provisions for their exhaustion; it seems incapable of cutting back now in the face of impending global climate change. Furthermore, current Western economies are unable to maintain their complex infrastructure; the United States will require $3 trillion (almost a year's GNP) just to cure its ailing systems. The North simply is not a good model for sustainable development.

Even if it were, one cannot suddenly impose huge technical changes on societies without creating massive social dislocations. The gradual depopulation of the countryside and the ensuing urban squalor that took place over the course of a century or more of industrialization in the North is being compressed into a single generation in the South, with disastrous consequences. For example, even though India is technically producing more than enough food to feed her people and indeed exports food, the number of under-nourished Indians is increasing because "efficiently" produced food costs money that dislocated, unemployed peasants have no means of buying [Lappe and Collins, 1978]. The few locally who benefit from such development are large landholders and the urban elite, while the foreign investors tend to repatriate most of their profits back to their home base in the rich North [Barnet and Muller, 1974].

In summary, as old social patterns collapse, so do the former benefits of unpaid services and communal self-help; but there is seldom any centralized social support system to replace what is lost. The local rich are -- temporarily -- getting richer (although often faced with raging inflation) and the poor definitely are worse off than before. As former Mexican state development officer, Gustavo Esteva [1987] puts it: "In Mexico, you must be either numb or very rich if you fail to notice that 'development' stinks."

Conflict Resolution

The kinds of dislocations and tensions caused by underdevelopment and by abortive development efforts underlie much of the conflict existing in today's world. Most countries of the developing world consist of two cultures and have a dual economy, the legacies of colonialism: a small number of rich, often "Westernized" urban or landed elite who control the government, the military, and most of the economic wealth, and a great majority of rural and urban poor, often without land or employment, who subsist as best they can on the margins of both the economy and the environment. The elite classes, located within the Westernized global economy, find both economic and military support from their trading partners in the North, while among the poorer classes, those who offer any resistance at all to their plight comprise the "insurgents," the "revolutionaries," and the "guerrillas." It was these that American boys were sent to Vietnam to suppress.

Other areas of Third World conflict are less directly related to the residual economic disparity of colonialism, but often involve aspects of religious or ethnic identity that parallels the identity with "class" involved in economic-based conflict. The "troubles" in Northern Ireland, the Basque separatist movement, the Iran/Iraq war, the Palestinian intifada, and many of the conflicts in recently independent African nations are mainly struggles for cultural autonomy. Often, of course, there are overtones of traditional homelands and of economic inequality, as well.

The Western response to violence, whatever its basis, has been to impose "justice" by the use of force. Until Gorbachev arrived on the scene, this was equally true for "East" and "West." Marxist socialism, after all, is also a product of the Western Enlightenment! Marxism looked to centralized power to enforce social "equality" just as capitalism looked to it to enforce the "right" of some individuals to amass enormous amounts of the nation's wealth and call it their own. Both assumed -- mistakenly -- that some combination of economic rewards and physical intimidation are sufficient for creating stable societies. Because Western ideas have permeated most of the globe, including the structure of the United Nations and the political thinking of a majority of the world's national leaders, it is likely that these two approaches will continue to be used in attempting to control conflict, without real hope of succeeding.

What is absent from the formal discussions of conflict among political scientists, "peace" theorists, and other "experts" is any real perception of human nature. Even political psychologists, whom one might suppose most likely to have useful explanations, discuss conflict in terms either of power or of "game theories." When people are either totally "free" or severely repressed, so the power theory goes, they are not violent; when they are only weakly coerced, violence can erupt. Game theorists, on the other hand, treat social stability from an assumption of individualistic, self-interested human behavior. If we learn reciprocally to trust one another, we will cooperate. Suffice it to say that neither of these instrumentalist approaches adequately explains conflict or offers a means for truly resolving it.

The power approach is applied equally to international and domestic conflict. In regard to the latter, both superpowers -- and a growing number of other countries as well -- are facing spreading social decay, with symptoms of racial or ethnic unrest, of rising use of alcohol and other drugs, of increases in violent crime, and of growing social and economic polarization. Without perceiving the causes, the response almost always is: Increase coercion. "Wage a war!" Even those proposing reasoned "compromise" as a solution to conflict are missing the point, for they do not get to the root causes of conflict, but merely paper over the individual telltale cracks as they appear [Fisher and Ury, 1981].

Critiquing the Western Worldview

In the world today, the Western worldview has come to dominate our global dialogues. In particular, the "laws" generated by political and economic theory are used as the guidelines for national and international decision making -- with the forlorn consequences I have briefly described for development and for conflict resolution. The theories generated by academics, it seems, are not reliable guides to reality. As Alfred North Whitehead once said, "The secondhandedness of the learned world is the secret of its mediocrity." Too seldom are the underlying assumptions examined for accuracy; too seldom are the theories derived from them compared with what is really going on. The human imagination constructs partial, always biased and often quite fanciful mental worlds and then proceeds to act as though we were really living in those worlds. The Western worldview is such a fanciful place. Because we cherish our imagined world and feel secure in it, it is hard to critique it, but it must be done.

One of the basic assumptions of our worldview is that the events of the universe not only *are* a sequence of causes and effects, but that the human mind can indeed understand the universe by discovering its cause/effect relationships. The scientific revolution ushered in a mechanical Cartesian universe, ultimately susceptible -- after the invention of the differential calculus in 1666 by Newton and Leibniz -- to mathematical description. It was theoretically possible to know, precisely, how all things work. The universe had to be logical, built up from simple to complex, from tiny to large, from substitutent parts to completed wholes.

Paralleling (sometimes preceding) the work of physicists and chemists, social theorists like Hobbes, Locke, Smith and Bentham proceeded to construct a new vision of human societies. They invented the individual human being as the central building block out of which political and economic relations with other building blocks were *consciously* forged through agreements, contracts, rules and laws. The central purpose of the individual was self-interest, personal pleasure, and survival: looking out for number one! Life could have no higher goals. Furthermore, self-interest was assumed to include greed and a desire for wealth and power, and for a person to behave differently was unreasonable -- it was *not* rational. Finally, this wonderful creature's cognitive intelligence permitted him (they never wrote about "her") instantly to perceive what actions were in his best interests. He was clearly a true know-it-all!

Out of this fancy, created by myriad fertile imaginations, the Western world has managed to create the modern disciplines -- from astronomy to zoology, from physics to sociology -- each pursuing some precise description of its assigned subset of total reality. The important thing for each is its internal logical consistency -- *not* whether it adequately reflects reality. Over the years, specialization has kept experts from checking whether two disciplines, developing in parallel, could even fit into the same universe.

A particularly interesting case in point, already noted, is that of the economists' insistence on continued growth in material output as the *only* realistic solution to the problems faced by the global political economy. This comes smack up against the limits of the biosphere and the Second Law of Thermodynamics, about which economists have remained blissfully ignorant. Another case in point, again already noted, is that political theorists have for so long argued that coercive force is necessary to social stability, when in fact it regularly fails to achieve this. Something is wrong with this selfish, individualistic, social-contract, power-oriented theory -- but what?

In this instance, the answer is less obvious. Psychology, which should have picked up on this, failed to do so because it has never truly understood the relationship of the individual to society. Patterns of culture and notions of permanent, lifelong bonding, not only to a mate, or to an extended family, but to a language, a set of traditions, a sense of shared sacred meaning, have been all but ignored by social theorists until quite recently. Now, finally, primatologists are beginning to provide clear insights into the depth and degree of personal bonding found among various social primates. Their studies, and others, now suggest that aggressive behavior occurs when bonds are threatened, and that grief ensues when they are broken. Moreover, in humans, these affects are even more highly developed than among other social primates. We evolved as social beings, par excellence; our cognitive rationality, such as it is, was tacked on afterward, and presumably assisted our forebears to maintain cohesive, functional survival groups. [For discussion of these ideas see Averill, 1968; Clark, 1989, 1990a, 1990b; Strum, 1987.]

This idea -- of the origin and role of human bondedness -- does not derive from the general worldview that permeates most of the academic disciplines. Rather, it seems to be arising de novo from efforts of those who, in researching the masses of information about ourselves, are selecting new pieces and putting them together in different ways. As with a shake of a kaleidoscope, we suddenly get a completely new pattern, one that I believe, along with Kenneth Boulding [1989], John Burton [1990], and others, offers new ways of thinking about the kinds of societies needed to provide bondedness, shared meaning and mutual support, all of which satisfy our deepest human needs. Such a vision begins to show why a society based on competitive individualism demands economic growth; it is an attempted -- albeit unsatisfactory -- substitute for deeper meaning. Competition further creates feelings of alienation that only exacerbate the need for more of these unsatisfying substitutes -- wealth and power. In fact, since World War II, the West has gone a long way toward creating the unhappy, greedy, competitive human beings that Thomas Hobbes once told us we were. For me, there is nothing more exciting than rediscovering our true identity and needs, and setting about building social patterns that -- at long last -- once again meet those needs.

256

References

Averill, James R., 1968 "Grief: Its Nature and Significance," *Psychological Bulletin* 70(6) pp. 721-48.

Barnet, Richard J. and R.E. Muller, 1974 *Global Reach: The Power of Multinational Corporations* (New York: Simon & Schuster)

Berkes, Fikret and M. Taghi Farvar, 1989 "Introduction and Overview" in F. Berkes (ed.) *Common Property Resources* (London: Belhaven Press) p. 6.

Boulding, Kenneth E., 1989 *Three Faces of Power* (Newbury Park, CA: Sage Publications)

Burton, John W., 1990 *Conflict: Human Needs Theory* (New York: St. Martin's Press)

Clark, Mary E., 1989 *Ariadne's Thread: The Search for New Modes of Thinking* (New York: St. Martin's Press)

Clark, Mary E., 1990a "Meaningful Social Bonding as a Universal Human Need" in J.W. Burton (ed.) *Conflict: Human Needs Theory* (New York: St. Martin's Press)

Clark, Mary E., 1990b "Understanding Conflict: An Evolutionary View." Lecture given at George Mason University, March 22.

Esteva, Gustavo, 1987 in S.H. Mendlovitz and R.B.J. Walker (eds) *Towards a Just World Peace* (London: Butterworths) p. 280.

Fisher, Roger and William Ury, 1981 *Getting to Yes: Negotiating Agreement without Giving In* (Boston: Houghton Mifflin)

Lappe, Frances Moore and Joseph Collins, 1978 *Food First: Beyond the Myth of Scarcity* revised edn (New York: Ballantine Books)

Strum, Shirley C., 1987 *Almost Human: A Journey into the World of Baboons* (New York: Random House)

Suzuki, David T., 1989 "An Environment in Crisis" videotape from conference *Our Common Future: Saving the Planet* (1431 Ocean Avenue, Suite B, Santa Monica, CA 90401)

FAIR PRACTICES IN HIGHER EDUCATION REVISITED

Robert DeBard

Introduction

Ten years ago, at the annual meeting of the American Association of Higher Education, Clark Kerr, then chairperson of the Carnegie Council on Policy Studies in Higher Education, handed out a report by the Council that was hot off the presses. Entitled Fair Practices in Higher Education, it was a harbinger of things to come throughout the 1980's. In retrospect, the piece reads as a mild recommendation for more educational vigilance as compared to the often strident admonishments for reform, not to mention diatribe best sellers, that came later. In its own way, however, it identified some of the most salient issues that were to be so massaged throughout the decade. Many of the same issues revolving around fair practices have led to the assessment of academic achievement industry that has become entrenched in legislative psyches and, less often, in higher education practices. It is time to revisit this humble little document to judge how its own recommendations are being implemented or ignored and why.

The trip is especially important for those who would advance the cause of non-traditional programs. A failure to take non-traditional learning seriously on the part of practitioners or students can result in a backlash against such efforts on the part of the public. The Carnegie Council's report began by stating that "Fair practice has been a basic and continuing theme of American higher education since the founding of Harvard in 1636." Today, the need for alternative practices to serve an ever more diverse student body in higher education makes the definition of fairness at once more confusing and compelling.

The Price of Not Taking Non-Traditional Programs Seriously

It should not be lost on advocates of non-traditional education that there has been a correlation between the surge in alternative learning programs and strategies in the 1970's and the more general calls for educational reform in the 1980's. The early promise of expanded educational opportunity has been challenged, albeit not directly, by a cynicism that this sense of freedom has occasionally turned into license. The fact that it is hard to identify how many rogue elephants are plowing their way through higher education's market place only exacerbates the harm being done by them. Public opinion of the worth of education is often relegated to its

---

Robert DeBard, Dean, Firelands College of Bowling Green State University,
901 Rye Beach Road, Huron, Ohio 44839

perception of truth, be it based upon myth or fact. Just as a generally favorable reputation for integrity on the part of higher education has allowed for active extension of alternative programs being accepted by the consuming public, this perception can be altered if this faith does not seem justified in the minds of those who would judge the quality of higher education.

The very fact the critics of higher education in general, and non-traditional programs in particular, tend not to openly criticize the processes used should not be a source of solace for advocates. These same critics are prone to cut to the "products" they consider educational outcomes such as factual drop-out rates or more perceptual evidence of "functional illiteracy" connected to factors like the inability to write technical reports, solve computational problems or identify who wrote Trojan Women. Insofar as there is discontentment on the part of the perceiver, there is a tendency to lump reputations together. Thus the conclusion that higher education in general is not getting the job done.

Furthermore, and all the worse of non-traditional programs, there is also a tendency to place blame for this state of affairs upon that which is new and different. When there are perceived problems, it is a common technique to identify that which is aberrant or not regular in discerning what is wrong with an operation. In education, that which is not in tradition can be singled out. In so doing the institutional answer to the question "what if the university took learning seriously?" might be answered with "stay away from non-traditional programs."

It is a high enough price to pay if this answer comes from the consuming public that might accept the axiom "let the buyer beware;" it is even more damaging when it is issued by major administrators within the university. The result can be that the license being practiced by a few can discourage the freedom of experimentation that is the cornerstone behind progress in non-traditional education. The most effective way to stifle the development of non-traditional programs is never to start them.

For those who would rely on traditional reputational "fair practices" related to program quality, non-traditional programs are easily discouraged. Such practices center around inputs rather than outcomes. The result is that the credential of the professor is what is judged, not the learning outcome of the student. The proximity of the classroom to the library presumes the ability to research is present. The number of hours students receive information in a class is more readily discerned than what they actually can use. These standards are most easily codified by accrediting and political bodies that control much of the ability of institutions to launch non-traditional programs. Rules such as requiring the majority of a degree program to be taken at the "home" campus, eliminating telecourse credits from state formula funding and limiting transferability of credits is the price the state of Ohio has exacted from its public institutions. Ironically, this stance has only encouraged the private sector to seize the market in whatever way they see fit and they have not had fair practices in their sights.

So the price for a few not taking non-traditional learning seriously can impact those who would. Fair Practices in Higher Education acknowledged that "higher education in the United States has made many contributions to ethical conduct." The first example cited was "By greatly expanding equality of opportunity in higher education." It should not be lost on advocates of non-traditional education that an absence of fair practice can stifle this positive and most inherently unique aspect of our mission. This is much too high a price to pay for the disregard of a few.

Non-Traditional Problems with Fair Practices

Considering why people who have dedicated their careers to education would not necessarily conduct themselves under a code of fair practice helps identify the problem of application to non-traditional education. Among the negative aspects of conduct in higher education cited in Fair Practices in Higher Education were:

-Inflated and misleading advertising by some institutions in the search for students

-Competitive awarding of academic credits by some departments and by some institutions for insufficient and inadequate academic work

-Inflation of grades by faculty members

-A substantial misuse by students of public financial aid

Each of these behaviors has been a part of non-traditional education and learners to some degree. To deny this is to become part of the problem not the solution. Relating how each of these negative behaviors can be played out by non-traditional programs and learners will illustrate why the issue of reputation both inside and outside the academy continues to haunt such education.

Competitive Awarding of Credit

It is a badge of honor to many continuing education practitioners that they are in the "business" of education. Unlike the fuzzy-headed academicians who rely on institutional reputation and required courses to occupy a workload, non-traditional program practitioners see "targets of opportunity" to be realized and "financial accountability" to be attained. The necessity of the latter creates the motivation for the former. That is to say, it is a fact that most "extension" or "continuing education" administrative units are established on a revolving fund basis which means that revenue must exceed expenses. Of course, there is nothing wrong with this accountability. What it does impact, however, is the motivation for the "target of opportunity." Providing service to new clientele is rightly considered being responsive; emphasizing the opportunity for financial gain is more accurately described as exploitative.

Another "business" factor concerns the programming expenses to be incurred in non-traditional education. It can be argued that such programs should require development of learning materials, greater provision of academic support service and explanation of program through promotion. Still, if cash flow becomes the prime motivator, giving such programs their fair practice due becomes financially challenging. For institutions that are in the business to realize a short-term accrual from targets of opportunity, it is doubtful how much of an investment and what level of support will be made.

Within public institutions, the fear of workload analysis based upon student credit-hour production can lead to unbridled competition between departments and lead institutions to initiate programs they otherwise would not consider. The mercurial response on the part of many colleges of education demonstrates this problem. Service to area school teachers has been the cornerstone of many extension programs that have actually led to the establishment of regional campuses. Unfortunately, the need for education schools to "extend" themselves led to contempt by other schools whose enrollments did not necessitate such responsiveness. Many schools of education actually lost considerable faculty resources on campus as the use of part-time faculty off-campus became more prevalent. Conversely, the recent increase in education majors has resulted in a cutback of extension programs as the reduced faculty resources have been consolidated in traditional on-campus programs as part of the education reform movement. This might be as it should be, but it does bring into serious question whether the former extension programs were mission driven or money driven. Perhaps more succinctly, was the generation of money the mission? The money motive is a source of competitive awarding of academic credit. That this can lead to low expectations of student performance will be considered next.

Inflation of Grades

In education, the customer is not always right. The motive for enrollment is not necessarily that the student plans to gladly learn as you would gladly teach. As good as many non-traditional students are capable of being, to assume that they will seek out quality programs that demand them to realize their full academic potential by upholding rigorous standards is naive even if it is potentially true. Just as likely, educators who serve adult learners meet up with very busy pragmatists who are trying to squeeze higher education into their life. To allow the students to set the tone by soliciting their enrollments and pandering to their needs is to relegate standards to luxury status. The notoriously high grades presented in education curriculum in general, and in graduate education in particular, is typical of the problem. The current shortage of nurses combined with the need for R.N.'s to earn baccalaureate degrees has created another market for expeditious programming that is all too often supported by grade point averages that would lead one to conclude that all adult learners are excellent even if standardized test scores refute this conclusion. Anyone familiar with providing academic programs to the military has felt the pressure to deflate requirements while inflating the grade outcomes in order to retain student interest.

Fair Practices in Higher Education advances the premise that "Learning needs and desires should provide the rationale for enrolling in academic programs. Students should not manipulate programs to achieve other ends." Those who have competed against programs that allow students such manipulation have come to realize how hard it is to "out low" such efforts. Institutions are afforded the opportunity to take this posture because, with the incredible diversity of institutional and program type in American higher education, the concept of "quality" is very difficult to define.

Misleading Advertising

The very fact that you have to advertise an educational program or institution indicates the competitive nature of modern college enrollment. The reality of lower high school graduation rates over the last decade combined with the need to interest untapped student constituencies such as adult learners have made advertising an inherent enrollment management strategy. Picking up Madison Avenue "newer," "brighter," and "better" fervor, higher education has joined in an orgy of advertised excellence. Little in the way of proof of quality is provided because little is available. This can lead to false advertising, but the nebulous quality of educational outcomes makes such falsehood hard to discern. Unfortunately, this does not necessarily result in being granted the benefit of the doubt when it comes to non-traditional programs. When public or institutional cynicism creeps into the evaluation, even quality programs can be dismissed.

It is now common to provide awards for continuing education promotional efforts. A review of these award systems, however, reveals a disturbing tendency. Creative glitz is more revered than clear and accurate messages. There are times when one could well question whether the need to market is not driving the mission. Emphasis upon program convenience can turn accessibility into a pandering to consumer whim. It is one thing to not have to leave your couch in order to receive academic credits through a legitimate telecourse; it is quite another to be assured that a travel course better described as a vacation will limit our academic engagement to keeping a journal of your impressions. The greater the need to attract enrollments, the stronger the pressure to either falsely claim outcomes or lower standards to match consumer mood.

Misuse of Financial Aid

Another point of cynicism involves the high drop-out rates and loan default rates among non-traditional programs. The scandals related to some proprietary schools are not that easily differentiated in the perception of the public from other programs that appeal to the adult learner. There is obviously a correlation between students who drop out without realizing their educational goals and those who feel little inclination to pay off an education-related debt.

The inordinate dropout rate of certain non-traditional programs represents a double negative for professionals in the field. First of all, the public perception is that high retention rates are related to high quality and so a low retention rate relegates a program's reputation to something less than high quality. Secondly, attrition is lousy business. The only exception would be the jaded "do you have a restless urge to write" type programs that demand prepayment for the entire educational experience and then save money by having people drop out early. Student attrition otherwise leads to negative word of mouth advertising, a constant need to attract and orient students, and finally, a potential lack of tuition resources to support the existing program.

The finest non-traditional programs do not accept the plug-in/plug-out theory of student retention. Drop-out rates can be correlated to an absence of academic services. The need for comprehensive diagnostic tests and required academic skills development and extended orientation come off as prescriptive intrusions to some non-traditional learners. This service has also been shown to be necessary for retention of these students which leads to the attainment of educational goals. It is time for non-traditional program practitioners to realize that having students not achieve their educational potential is unfair practice.

Making Fair Practice Work for Non-Traditional Programs

It has been said that managers do things right while leaders do the right thing. This illuminates the difference between efficiency and effectiveness. There is no doubt a thin line between efficient practice and unfair practice; between effective programs for students and productive money mills of institutions. The following list of recommendations is in part taken from those listed in Fair Practices in Higher Education while expanded to refer directly to non-traditional programs. They are offered not as gratuitous rejoinders to already overworked non-traditional practitioners, but as an affirmation of that which is already being accomplished by many and should come to be perceived by those outside of non-traditional education.

Recommendation 1

The assessment of academic achievement should be integrated into every non-traditional program as both a stated objective in announcing the program and as a verification of outcomes. If this cannot be done, the practice of the program should not receive institutional support.

Recommendation 2

Non-traditional program evaluation should include a student tracking system to verify alumni satisfaction level in each of the first three years after completion of the program whether this is a single course, certificate sequence or degree program. This evaluation will not only provide valuable information for program planners, but keep students interested in continuing their education.

Recommendation 3

Information gained through both the assessment of academic achievement and the alumni surveys should form the basis for future program promotion. Specifically, such announcements should include program completion rates, placement rates where applicable, and, when possible, referenced names of former students who can be contacted by potential students concerning the advertised program.

Recommendation 4

Orientation of adult learners should place emphasis upon academic placement leading to retention rather than simply enrollment. The impact of such placement on former new students should be studied and reported to incoming students. Academic advising should be required for all non-traditional students and emphasis should be placed upon academic planning rather than course scheduling.

Recommendation 5

Part-time faculty who teach in non-traditional programs should be expected to maintain office hours commensurate to their workload. This presumes that they also will be afforded office space to nurture out-of-class interaction with students.

Recommendation 6

All course syllabi should list course objectives as well as class activities that are designed to lead to the accomplishment of these objectives. For example, if engendering critical thinking of a certain subject matter is supposed to be an objective, some writing activity rather than merely multiple choice tests should be included.

Recommendation 7

Evaluation of student performance should be clearly delineated in the course syllabus and carried out within the context of the class. Midterm grades should be encouraged to both verify that something has been evaluated and to nurture positive student reaction.

Recommendation 8

The efficacy of having the financial posture of non-traditional programs assume that "every tub should be on its own bottom" should be determined by whether or not traditional programs are asked to do the same. That is to say, this posture might prove to be the most fiscally responsible, but it should not be limited by any institution to only its non-traditional programs.

Recommendation 9

Every non-traditional student should receive a code book of rights and responsibilities that takes into consideration the non-traditional nature of a given program. Normal college catalogs do not suffice. This code book should include policies on such things as sexual harassment, attendance, course withdrawal and refund policies, academic dishonesty penalties, grade appeal and grievance procedures. The point is to actually try to communicate rights and responsibilities to students rather than just protect the institution's legal standing through a published catalog written in educationese to traditional students.

In conclusion, no demographic analysis would indicate that this nation can disenfranchise learners by turning back to traditional practice in the name of fairness. But in this age of educational review, reform and refutation, the need to forge a social contract between non-traditional learners and the institutions that would gladly teach them has never been more important.

HOW CAN WE KNOW SACAGAWEA?

Donna J. Kessler

Interdisciplinary Scholarship and Epistemology

As textual "construction," hegemonic reproduction of ethnic and class biases, and other post-structural critical questions invade arenas heretofore deemed the strongholds of truth, scholars struggle with the ramifications that all renderings, no matter how empirical they may seem, emerge from a particular perspective. Histories and ethnologies, for example, no longer superior to "fabricated" works on the basis of objectivity, implicitly confer their own underlying assumptions. Where, in the face of such fundamental, yet unsettling, comprehension, does that leave truth? How is one to know what is valid, especially when confronted with opposing portrayals of reality?

Jane Tompkins, as she encounters widely differing accounts of Indian/white interaction in American history, addresses the epistemological dilemma in her essay "'Indians': Textuality, Morality, and the Problem of History." She claims that awareness of the perspectival nature of texts need not result in critical paralysis. Nor must ensuing discussions be restricted to the nature of knowledge. Outlining the neopragmatic stance, Tompkins argues that we can "know" only that which can be pieced together "according to what seems reasonable and plausible," based on evidence available (118). While Tompkins' conclusion may be one way of avoiding epistemological metadiscourses, she fails to propose a method for arriving at what seems "plausible" and "reasonable."

Interdisciplinary scholarship offers researchers one way to begin to "know." Crossing the permeable boundaries of traditional academic concentrations in a demonstration of the interdependence and articulation which have been ignored or denied in conventional approaches to higher education, interdisciplinary scholars straddle two or more domains, a perspective yielding a useful vantage point. Although history and literature, for instance, may delineate different appraisals of events and people, they often advance similar judgments, carrying on a dialogue of consensus. These articulations reinforce each other within a culture, perhaps proliferating dominant ideologies. Positioned on the boundaries between disciplines, researchers observe correlations and reverberations and can begin to scrutinize cultural consensus with a critical eye, questioning underlying premises, challenging the "truths" they provide.

Donna J. Kessler, Associate Professor of Humanities, Embry-Riddle Aeronautical U., Daytona Beach, FL 32015

Cultural Consensus: What We "Know" ?

Formation of Cultural Consensus

Although a society's doctrines are most often subject to alteration from one historical period to another as attitudes modify and needs change, others appear more deeply embedded, proving resistant to transformation. Intersubjectivity forms a necessary basis upon which a culture builds common meanings, from which collectively-held ideas and experiences can be translated into a satisfying history. Naive acceptance of popular images, however, prove to be extremely destructive. In heedless approbation, a culture can disregard structures of power and dominance existing in every society, perhaps most profoundly in those constituted of many ethnicities. As stereotypical images continue to proliferate unchallenged, so too do the ideologies they represent.

Sacagawea: An Indian Princess by Cultural Consensus

An exploration of the intersection of history, cultural ideologies, and popular literature has resulted in a synthesis of how consensual images may be bound in stereotypical conceptions of race and gender. Here I examine the "cultural work" of an image particularly resistant to change, the Indian Princess as embodied by Sacagawea, a woman historically tied to the Lewis and Clark expedition as it "opened up" the Northwest Territory. One of the most renowned and idealized personalities of the American West, Sacagawea remains a legendary figure, who for over 180 years has presented an appealing persona to which historians, novelists, and artists have returned for inspiration, a figure they have constantly re-created for their various purposes. From first-hand observations made by Lewis and Clark to casual references in programs like thirtysomething (March 1989), Sacagawea has existed in the minds and imaginations of white Americans. Her animation does not speak so much of her as a person nor of native culture, but instead addresses itself to the needs and aspirations of white ideologies.

The legend of Sacagawea, steeped in cultural contingencies and stereotypical distortions, provides but one example of hegemony as it relates to Native Americans. Since texts constitute social as well as individual commentary, ideological study, conjoined by an analysis of historical events and renderings from popular literature, may profitably consider ways in which a work of art connects with the politics of its society (Krupat in Pearce vii).

White Conceptions of Native Americans

Manifest Destiny and Cultural Stereotypes

One of the most important concepts that has dominated white culture in America came to be known as Manifest Destiny, summarized by Frederick Jackson Turner's "frontier hypothesis." Turner's theory proposed that American development could be explained by the existence of free land, its continuous recession, and the advance of white settlement increasingly westward (Smith 250). Early settlers conceptualized the continent as empty, employing justifications which expressed the explicit primacy of "civilization" over "primitive" cultures, thus rationalizing white possession of vast stretches of native territories (Smith 251).

One means of effecting this imaginative construct was by stereotyping native groups that occupied the "free land." As Ward Churchill, Mary Anne Hill, and Norbet Hill write:

> The history of the conquest needed popular revision if it were to be utilized as a matter of national pride; the Native had to be universally and negatively dealt with if such a pattern were to be actualized, and consistent stereotyping was the most effective means to this end. (37)

These fixed images not only carry prejudice and distortion but also serve an extremely conservative and destructive political function (Sundquist 19-20).

Patterns of Indian Stereotyping

Two general patterns have defined the Indian--the Noble Savage and the Howling or Ignoble Savage--each politically useful in its own way. Cruelty, barbarity, and treachery characterize the very bad Indian or Howling Savage, a portrayal emerging from sensational accounts of warfare and white captivity among tribal groups (Kaufmann 23). The very good Indian, on the other hand, exudes qualities of self-sacrifice, trustworthiness, and inferiority (Sundquist 56). Popularized in nineteenth century novels, the latter is portrayed as a virtuous, albeit primitive, child of the forest, as negative an image as the former.

Since there has been virtually no written authorship by Native Americans until recently, these images have rarely been countered in the cultural arena. "Indian heritage," writes Donald Kaufmann, "went up for grabs to the nearest white consumer of land" (23). No other race or ethnicity has been confined to such a narrow and permanent fictional identity as each generation of whites re-invents the Indian (Rannard Strickland in Stedman x).

Stereotypes of Indian Women

Native American women have, by no means, been exempt from Indian stereotyping, emerging as Princesses or Squaws (Drudges). These patterns prove to be even more restrictive than male types, suggests Rayna Green ("Perplex" 713), since both female images are intimately tied to a national mythos. The Squaw is a "depersonalized object of scornful convenience . . . [whose] physical removal or destruction can be understood as necessary to the progress of civilization." The noble Princess, on the other hand, symbolizes "that very civilization" ("Perplex" 713-14) as she abets white men in conquest of the wilderness.

Although literary and media glimpses of the Squaw are plentiful, they remain just that, glimpses of an image. The Princess, nonetheless, possesses the potential for a sustained examination of a heroic Indian woman, a favored theme of playwrights, poets, and novelists for more than two centuries. As Asebrit Sundquist argues, the Indian Princess, a composite Earth Mother, Good Mother, and Angel, embodies attributes of growth and nature, goodness and self-sacrifice, beauty and grace, a kind and friendly helper to whites (80-97). Even more insidious than might first be imagined, the Princess combines the noble and the primitive, as is typical of male Noble Savages, but she exists only as a reflection of her relationship with white men. Her skin lighter than most natives but darker than whites, she is defined as noble only when, in order to aid a white man or men, she defies "her own people, exiles herself from them, becomes white, and perhaps suffers death" (Green, "Perplex" 703-4).

The most renowned of all Indian Princesses is Pocahontas, her story possessing ingredients of legend: a savage, a hero, chivalry, royalty. Leslie Fiedler notes that she is "an apt symbol of White man's reconciliation with the converted natives" (64, 70). Perhaps the first American heroine, Pocahontas is not the sole Indian Princess of note; so too is Sacagawea (Fiedler 78; Stedman 28; Sundquist 52).

Sacagawea: An Indian Princess

Useful Historical Omissions

Sacagawea first appears in history in conjunction with the 1804-1806 expedition lead by Captains Lewis and Clark, an event which embodied in action the spirit that had dominated American culture for some time (Morison 192-3). Following the purchase of the Louisiana Territory, Jefferson persuaded Congress to fund an exploration, ostensibly to study the terrain. The purpose, as Henry Nash Smith points out, was not restricted to mere fact-finding since "geographical knowledge was a necessary preliminary to economic penetration and eventual political domination" (16). Sacagawea, inextricably linked to the success of the expedition, serves as an invaluable symbol of native complicity in that settlement process.

The legend of Sacagawea and its attending cultural functions bear investigation. Not only is she a latter-day Pocahontas, fostering the image of a dusky maiden who helps the white man selflessly, but as a representative of Manifest Destiny, she recognizes the primacy of whites in taking possession of the land, pleading with her own people to accept the "gifts" white men have to offer. As Fiedler writes, her story serves "a bourgeois reading public, who [have] needed desperately to be reassured that if not all Indians, certain better Indians . . . welcomed the end of their, alas, pagan, though idyllic world" (77; original emphasis). Sacagawea illustrates exceptionally well political significance implicit in legend.

The historical Sacagawea is first delineated in the journals of Lewis and Clark, who carefully narrate her actions but introduce no physical descriptions nor any psychological motivations for her behaviors. Though he discusses the dilemma of depicting Pocahontas, Leitch Wright could be speaking of Sacagawea when he asserts: "it is not possible to guess her thoughts accurately," since there exists "not a single line revealing her innermost feelings, forcing us to rely on the perceptions" of white men (71).

Definitional absences in the first portrayals of Sacagawea allow ample space for later imaginative constructions. Initiating the tradition of writers who "fashioned narratives that go far beyond what can be known from reputable historical sources" (Ronda 256), historians and novelists thrust Sacagawea into legend as an extraordinary Indian Princess. Maintaining the encompassing theme of the progress of civilization, writers transform Sacagawea into an overt reflection of Manifest Destiny. In addition, the Sacagawea legend, flexible enough to allow variations, also adheres to timely issues which emerge as American culture and its requirements change. These works mold a lagend that functions in successive eras while transcending discrete moments to serve the national mythos.

Dye's Sacagawea: A Timely and Timeless Princess

Eva Emery Dye's The Conquest, published in 1902, provides an excellent example of a Sacagawea who serves two purposes, one tied to the particular moment and milieu, the other devoted to the general theme of Manifest Destiny. At the turn of the century, writes Samuel Morison, "Americans could look back over three generations of unparalleled progress. . . . The continent was subdued, the frontier gone" (499). Moreover, since Indians no longer posed a threat to settled areas, they became nostalgic emblems of the country's past. Coupling nostalgia with unquestioning affirmation of the glorious exploration and settlement of huge portions of the United States, The Conquest prepared the country for celebrations marking the centennial year of the Lewis and Clark expedition.

In addition to the timeless ideology of Manifest Destiny, other timely concerns surfaced strongly during this period. Humanitarian reform of the "Progressive Era" manifested in the establishment of slum settlement houses, organization of charities, and the beginning of the women's suffrage movement (Morison 504-507). Deeply committed to the women's emancipation, Dye introduced to the world a heroine, one which American women could idolize and emulate (Clark and Edmonds 1, 89). Of her conception, Dye writes:

> "Out of a few dry bones I found in the old tales of the trip, I created Sacajawea and made her a living entity. For months I dug and scraped for accurate information about this wonderful Indian Maid." (qtd. in Clark and Edmonds 93)

Using events detailed in expedition journals, Dye weaves a tale, not only of the glorious exploration of an unknown territory, but also of a young woman in whose hands the fate of the mission is placed. Dye's Sacagawea thus symbolizes Manifest Destiny at the same instant she represents the newly emancipated American woman. When, for example, Sacagawea suffers during the difficult delivery of her son, which occurs only weeks before embarking on the expedition, Dye writes, "Poor little Sacajawea! She was really very ill. If she died who would unlock the Gates of the Mountains?" (197). She is no mere woman accompanying the explorers nor, for that matter, even an interpretress; she is the key to the expedition's potential success.

Despite her concern for depicting Sacagawea as an essential element of the expedition, Dye relies on the Princess stereotype. Dye dubs Sacagawea "Princess" when expedition members discover her brother is chief of the Shoshones, the tribe from which she had been kidnapped as a child. Neither does Dye allow Sacagawea to relinquish the accoutrements of virtuous womanhood. Stressing the baby's presence at every point, Dye features associations reminiscent of the 19th century "cult of true womanhood" as seen in a scene of their winter encampment near the Pacific:

> All day the firelight flickered on Sacajawea's hair, as she sat making moccasins, crooning a song . . . with the baby Touissant toddling around her on the puncheon floor. . . . The modest Shoshone princess never dreamed how the presence of her childand herself gave a touch of domesticity to that Oregon winter. (245)

Sacagawea is archetypal "Woman," and "Mother," but Dye's goal of outlining a heroine is never lost. When Lewis and Clark, for example, inform Sacagawea she cannot see a beached whale because the journey of a few miles might be too arduous, an excuse ringing with irony since Sacagawea has just completed a trek across half a continent with a baby on her back, Dye writes, "This was a staggering blow to Sacajawea, but her woman's determination had been aroused and she took the rostrum, so to speak." Thrusting the baby at her husband Charbonneau, Sacagawea argues her case before the captains (250). Filled with a universal "woman's determination," Sacagawea forces her husband to tend the child and defends her rights.

The culminating portrait of Sacagawea's power, however, does not occur until the return trip. At the Continental Divide, Sacagawea points to the "door of the mountains," and Clark follows. She cries, "'Onward!' . . . 'the gap there leads to your canoes!'" As Dye asserts, "Before them arose, bewildering, peak on peak, but again the Bird Woman" leads the way (283-285). Here is Sacagawea, a heroine to white women, who not only ventures into the wilderness with men, but who actually supercedes them in some ways.

The explorers' departure from Fort Mandan as they leave Sacagawea behind provides Dye with the best opportunity to idealize her Indian woman:

> Sacajawea, modest princess of the Shoshones, heroine of the expedition, stood with her babe in her arms and smiled upon them from the shore. So had she stood in the Rocky Mountains pointing out the gates. . . . Madonna of her race, she had led the way to a new time. . . . Across North America a Shoshone Indian Princess touched hands with Jefferson, opening her country. (290)

The "Cultural Work" of Dye's Sacagawea

This first fictional Sacagawea, strong and authoritative, yet retaining the traits of idealized womanhood, was embraced by an thousands of adoring readers. The cultural work Dye so consciously pursues is an attempt, as Jane Tompkins argues in Sensational Designs, "to redefine the social order . . . articulating and proposing solutions for the problems that shape a particular historical moment" (xi). Sacagawea becomes an symbol for how women can be liberated and yet retain qualities of true femininity.

Tompkins asserts that popular literary forms, functioning within their cultural milieu, provide "a society with a means of thinking about itself, defining certain aspects of a social reality which the authors and their readers share[d], dramatizing its conflicts, and recommending solutions" (200). Although The Conquest is set one hundred years in the past, Dye's portrayal of Sacagawea addresses this cultural work. As Dye remarks, "'The beauty of that faithful Indian woman with her baby on her back, leading those stalwart mountaineers and explorers through the strange land appealed to the world'"(qtd. in Clark and Edmonds 94).

A question, however, remains. What else in this story resonated with white culture? Surely, as Dye declares, some of the women were in search of a heroine, but that cannot completely account for its widespread acceptance. Coterminous with the tale of a heroine, other passages, by no means subtle, express an important ideology, one which had been continuously useful for decades. For example, when Sacagawea's less-than-heroic French husband is introduced, Dye asserts, "The worst white man was better than an Indian husband" (197). Later, as the group is preparing to leave her, Sacagawea "looked wistfully. She, too, would like to visit the white man's country" (289). At the end, Dye expresses her meaning explicitly:

> The Indian? He fought and was vanquished. How we are beginning to love our Indians, now that we fear them no longer! . . . We might have tamed him but we had not time. The movement was too swift, the pressure behind made the white man drivers as the Indian had driven before. Civilisation [sic] demands repose, safety. And until repose and safety came we could do no effective work for the Indian. . . . We have forgotten . . . that the Indian beleaguered our wooden castle. (442)

Beyond the proclamations of Manifest Destiny evidenced in the rhetoric, other ideological considerations are noteworthy. Whites are able to love Indians now that they are no longer a threat, and Dye even codifies a failure to tame the Noble Savage. But accompanying these admissions is a sense of inevitability.

The "movement" is at first expressed in passive construction, one which allows action to occur without agency. Whites had no choice in taking over because events transpired by themselves. Following very quickly is the notion that Indians preceded white men in the act of conquest, making them complicitous in the cycle of acquisition, forcing them to acquiesce to the more advanced civilization's right to usurp the land. Then civilization itself becomes an anonymous actor, the agency which demands for itself the "safety" and "repose" necessary for growth. Finally, the real actors, the dominant "we" of the passage, emerge to help the Indian, only after civilization has overcome obstacles in its path, obstacles which threatened its very locus, "the castle."

Dye, therefore, in an attempt to accomplish one kind of cultural work, such as that suggested by Jane Tompkins, in fact also succeeds in another, outlined by Philip Fisher in Hard Facts. While creating a woman to be admired and emulated, a model from which other women might build their lives, Dye simultaneously embraces an enduring ideology of white America, repeating and codifying Manifest Destiny. In accomplishing dual purposes, Dye confines Sacagawea to the ambiguous role of Indian Princess.

The Dilemma of Sacagawea

A legendary figure in this portrayal and others, Sacagawea becomes an image imposed on native culture by white imagination. Although variations on the theme occur over time, fundamental descriptions and meanings behind them remain constant. Sacagawea never escapes the stereotype of Indian Princess. Moreover, novelists who use her legend are unwilling, for the most part, to tackle difficult questions. How, for example, can a heroine of white culture also be celebrated in her own, especially if they are in opposition? Underlying these popular renderings, regardless of the era, remain themes of white cultural supremacy and moral imperative to conquer the land and civilize the natives. And the portrait persists. In a recent ad for a Hamilton Collection commemorative plate, Sacagawea is touted as "A Brave and Noble American Heroine." The beautiful, young maiden sits demurely in the foreground cradling her baby while Lewis and Clark discuss important matters behind. The plate, adapted from a David Wright print, emphasizes colors of red, white, and blue. The cradleboard decorations, in fact, appear in a design remarkably similar to the American flag.

Of course, Sacagawea is not the only Indian Princess; she is one of a long line. Therein lies the dilemma. The reader could say, and rightly so, that popular works concerned with these portrayals are trite and sentimentalized and that they should not be read for those reasons. But aesthetics is not the most important issue at stake in these texts. Politics is. Other than the complementary Squaw, few dissenting portraits of Native American women have ever been produced, in part because white culture has been unwilling to give up legends that serve dominant ideologies so well. As Gretchen Bataille and Charles Silet write, "As long as the collective consciousness of the nation could identify emotionally and historically with the myth, there was no need to modify or alter its dimensions" (3).

Epistemology and the Indian Princess

Rayna Green, a historian of Native American descent, declares, "It is time that the Princess is rescued and the Squaw relieved of her obligatory service" ("Perplex" 714). Scholars agree that this can be accomplished as literature about Native American women centers upon real people, including the "tribal chairwoman in blue jeans" (Green, "Review" 265). Geniuses might produce just such portraits even though they do not share the tradition of the subject, but "for the fullest expression of the minority presence in America there must be artists who are part of the culture they depict and products of the tradition they describe" (Butcher 23). These self-portraits are now coming into existence. Maybe soon white culture will be ready to retire Indian Princesses.

Sacagawea, an image born of the intersection of history, cultural ideologies, and popular literature, is but one example of the benefits of interdisciplinary research. Although evidence suggests that a reader cannot "know" Sacagawea or other Indian Princesses, these projects are nonetheless valuable. By first observing how disciplines can carry on a dialogue of consensus, scholars begin to read through structures that prove so resistent to change, ultimately questioning underlying presumptions, perhaps arriving at an awareness of didactic, hegemonic qualities of dominance. Looking beyond the "truths" such renderings offer can help people break free of persistent, culturally-held visions that may cripple their ability to see--to understand--or to even concede--the existence of other views that constitute the polyphonous voices of American culture.

References

Barnett, Louise K. The Ignoble Savage: American Literary Racism 1790-1890. London: Greenwood Press, 1975.

Bataille, Gretchen M., and Charles L. P. Silet, eds. The Pretend Indians: Images of Native Americans in the Movies. Ames: Iowa State UP, 1980.

Churchill, Ward, Mary Anne Hill, and Robert S. Hill. "Examination of Stereotyping: An Analytic Survey of Twentieth Century Indian Entertainers." Bataille and Silet, 35-48.

Clark, Ella E., and Margot Edmonds. Sacagawea of the Lewis and Clark Expedition. Berkeley: U of California P, 1979.

Dye, Eva Emery. The Conquest: The True Story of Lewis and Clark. Chicago: A. C. McClurg, 1902.

Fiedler, Leslie A. The Return of the Vanishing American. New York: Stein and Day, 1968.

Fisher, Philip. *Hard Facts: Setting and Form in the American Novel*. New York: Oxford UP, 1987.

Green, Rayna. "The Pocahontas Perplex: The Image of Indian Women in American Culture." *The Massachusetts Review*. 16.4 (Autumn 1975): 698-714.

-----. "Review Essay: Native American Women." *Journal of Women in Culture and Society: Studies in Change*. 6.2 (Winter 1980): 248-267.

Kaufmann, Donald. "The Indian as Media Hand-Me-Down." Bataille and Silet, 22-34.

Morison, Samuel Eliot, Henry Steele Commager, and William E.Leuchtenburg. *A Concise History of the American Republic*.1971. Oxford: Oxford UP, 1983. Pearce, Roy Harvey. *Savagism and Civilization: A Study of the Indian and the American Mind*. Berkeley: U of California P, 1988.

Smith, Henry Nash. *Virgin Land: The American West as Symbol and Myth*. Cambridge: Harvard UP, 1950.

Stedman, Raymond William. *Shadows of the Indian: Stereotypes in American Culture*. Norman: U of Oklahoma P, 1982.

Sundquist, Asebrit. *Pocahontas & Co.: The Fictional American Indian Woman in Nineteenth-Century Literature: A Study of Method*. Atlantic Highlands, NJ: Humanities P, 1987.

Tompkins, Jane. "'Indians': Textuality, Morality, and the Problem of History." *Critical Inquiry* 13 (Autumn 1986): 101-119.

______. *Sensational Designs: The Cultural Work of American Fiction 1790-1860*. New York: Oxford UP, 1985.

Wright, J. Leitch Jr. *The Only Land They Knew: The Tragic Story of the American Indian in the Old South*. New York: The Free Press, 1981.

RECRUITMENT AND RETENTION OF SPECIAL STUDENTS AND FACULTY

MARKETING A NEW PROGRAM: A COLLABORATIVE CHALLENGE

Clara J. Barut
Julie R. Pompa
Robert L. Joyce

Introduction

Unique challenges were presented when a selective, independent liberal arts college received authorization for its first off-campus program for adult learners. While the Division of Lifelong Learning at Heidelberg College has had special programs to serve adult learners since 1974, the off-campus Degree Completion Program represented the Division's initial implementation of a targeted program sixty miles from main campus.

Heidelberg's Degree Completion Program targets adult learners who are at least 23 years of age, have three years of full-time work experience and have completed 39 semester hours of credit. The program is a series of evening courses offered in eight-week terms. Five academic terms are offered each year. Most classes meet one night a week for four hours and learners are limited to two courses each term. The program focuses only on the business administration curriculum, and can be completed entirely through the off-site campus eight-week academic terms each year. The curriculum is identical to what is offered on main campus and the majority of faculty are full-time on main campus. Our goal has been to strike a balance between offering an accelerated program while maintaining academic integrity.

Three key issues were identified: how to shift services effectively from a residential/rural area to a metropolitan/commuter area; how to increase awareness and participants when competing with two large state universities and several small, private colleges; and how to complement the external marketing strategies with internal marketing strategies.

A very important factor in the process was the blending of academic and marketing perspectives. Balance was achieved by analyzing input from three perspectives: the main campus view through the Associate Dean of Lifelong Learning, the off-site view through the Director of Continuing Education, and the area marketing view through the Account Executive.

Clara J. Barut, Director of Continuing Education, Heidelberg College, Maumee, Ohio
Julie R. Pompa, Account Executive, Lauerer Markin Gibbs, Inc., Maumee, Ohio
Robert L. Joyce, Associate Dean for Lifelong Learning, Heidelberg College, Tiffin, Ohio

Asking the questions "Whose needs are being met?" and "Is it appropriate for the adult learner?" assisted the college administrators and marketing executives in developing the initial successful campaign. Continued collaboration between the principals focuses on refinement of external and internal strategies.

Objectives

The main objective was to increase awareness and participants in the off-campus program. A secondary objective was to create a positive image for the off-campus program that was congruent with the strong image that is portrayed by programs on main campus.

Strategies

The strategy in developing the marketing communications program was to demonstrate the real difference between a Heidelberg education and one adults could obtain from other area institutions. To accomplish this goal, special features of the Heidelberg program were highlighted.

- Quality: Heidelberg College offers a high standard in post-secondary education through a tradition built on a combination of excellent educational opportunities and a rich cultural experience. Heidelberg's off-campus program offers this same rich tradition and heritage.

- Competitive Education: Heidelberg's off-campus program is geared specifically to the adult learner. The accelerated classes and the portfolio program are features that separate Heidelberg from its local competitors.

- Location: The off-campus program is located in the prestigious Arrowhead Park development in Maumee, Ohio. Several large employers have their headquarters in the park, and the park is accessible from the main expressway interchanges. The Park is in a secure area and parking is not a problem.

The marketing program was approached in two phases. Phase I focused on short term programming to culminate with the opening of fall term classes. Phase II concentrated on building on the reputation of the Maumee campus and assisted in gaining additional students throughout Northwest Ohio. Since the Maumee campus hoped to attract learners with very specific qualifications, the communications approach had to be one which was dignified and presented a no-nonsense strategy for completing one's education. A very "businesslike" approach was reflected in the design of materials, advertising and other background reference materials.

A "tagline" -- "Heidelberg College, for a higher degree of success" -- was selected for use with all materials as representative of the "higher" level of education available, and the "success" attributable to a degree from Heidelberg College. The tagline would appeal to an adult who is reached some level of "success" and is striving for a higher level of success, not the student just out of high school.

Research

Heidelberg research had indicated that a primary group of potential learners could be found in the area's business community. The marketing firm conducted additional research of area businesses, particularly those located in Arrowhead Park and adjacent communities. Businesses were identified that were interested in passing information along to their employees, and allowing a Heidelberg representative to visit their offices.

Information Folder

A "portfolio" resembling a briefcase was designed to build on the "professional" approach of the program. Inside were background materials describing the campus, course offerings, tuition and financial aid information, course descriptions and faculty profiles. The briefcase was sent to potential applicants who had contacted the Maumee office. Included with the briefcase was a letter from the Director of Continuing Education, forms for transcript requests, the tuition reimbursement form and a map.

External Marketing: Media Campaign

A newspaper advertisement was designed that presented a business-oriented message, background information on the program and a rendering-like drawing of the building. That design was used in a "family" of materials which present a complimentary look and feel, such as a poster, which was distributed to the businesses contacted during the research phase of the program, and through trade and career exhibits. The design was also incorporated in a direct mail piece and an exhibit graphic for use at selected career presentations. A special advertisement was placed in the Toledo Symphony program for the year.

Radio advertisements were developed which carried on the dignified, sophisticated feeling of the campaign through the use of classical background music. The advertisements were placed on local stations with broad coverage, targeting the 25-45 age group.

A program of ongoing media contacts on a variety of fronts focusing on selected aspects of the College program has been initiated.

Internal Marketing: A Dual Approach

A dual approach was used to market the program on an internal basis to the prospective learners and to the faculty on main campus.
"Service" was and is the focus when prospective applicants contact the staff at Heidelberg. Telephone coverage is provided twelve hours each day except on Friday when coverage is for nine hours. Office hours for one-on-one consultations match the times available for working adults; the last appointment time is 9 p.m. Courtesy and follow-up are paramount when meeting with potential learners and current enrollees.

The multiple commitments that adults have in their lives are acknowledged by the staff. The staff focuses on taking the "red tape" out of attending an accelerated program. The courses required for an individual's graduation are monitored and scheduling is projected for a year in advance.

The off-campus site serves as a "one-stop-shop" for consultations, registrations and purchasing of textbooks. Syllabi and textbooks for courses are available two weeks prior to the start of a new term. Library materials can be accessed through collect telephone calls to the main campus library or requests can be faxed to the Reference Librarian.
"WIN" surveys are done on a regular cycle to receive feedback on wants, needs and interests for future service.

Thank you cards, birthday cards and holiday cards are sent to acknowledge students' special events.

A faculty committee was involved in the initial planning efforts for the facility and the program. The design of the corporate-style classrooms, consultation rooms and lobby was accomplished with input from full-time faculty. Issues were raised and recommendations were developed within the committee structure.

Balancing of course assignments between main campus and the off-campus program are done after the Associate Dean for Lifelong Learning consults with faculty. A special effort is made by the off-campus staff to determine the needs of the faculty and be of service to them. Constant coordinating of efforts between the Associate Dean of Lifelong Learning and the Director of Continuing Education is done.

Evaluation

The marketing materials and the Degree Completion Program have been well received by potential learners and area businesses, as well as by competing educational institutions. The briefcase and posters are cited for their professional appearance, completeness and impact.

Enrollment since the commencement of the marketing effort in the Fall of 1989 has doubled. The "lag time" for adults coming to an initial consultation after receiving the briefcase and then enrolling has been charted as taking from two weeks to eight months.

Administrative support from main campus, the solid service base previously established for adult learners on main campus through the Non-Traditional Studies Program and Weekend College, the "tracking" system for monitoring courses needed, the service orientation of the off-campus staff, the excellence of the teaching faculty, and the attention to detail given to the total program have enhanced the creative work done by the marketing firm.

Continually asking "Whose needs are being met?" and "Is it appropriate for the adult learner?" has enabled the principals to tailor the program to the population being served.

SERVICE MANAGEMENT: IMPLICATIONS FOR ADULT LEARNER RECRUITMENT AND RETENTION

Raymond W. Campbell

Introduction

Many of the colleges and universities reporting enrollment increases last fall attributed their successes to better retention of returning students (Magner, 1989, pp. A37-A38). In previous years, growth or stability in college enrollments was often credited to higher participation rates among the traditional-age college-going population and greater numbers of nontraditional learners--particularly older, part-time female students (The Pew Higher Education Research Program, 1990, pp. 1-8). More recently, as competition for traditional-age freshmen has intensified, colleges have begun to sponsor parties, support travel costs, and produce videotapes to attract qualified students (Wilson, 1990, pp. A1, A34). Altogether, these factors contribute to college enrollments at a time when there are fewer and fewer traditional-age students to be recruited.

As the number of adult students attending college has increased, the role of public relations, marketing, and promotion has also blossomed. The growing importance of these functions is directly related to the voluntary nature of adult learning. That is, promotional activities have been brought into play to raise the awareness of potential adult students regarding new times for courses, flexible admissions criteria, more adaptable program requirements, and off-campus course/program opportunities. Institutions of higher education have implemented these curricular and delivery modifications and promoted them specifically in order to attract and retain adult students.

Universities expecting to maintain or increase their future share of the adult student market are facing the immediate need to enhance recruitment and retention efforts. One way they can address this need is by improving the management and delivery of service to their students. Establishing a program to develop and deliver high quality service may be just as effective in attracting and retaining adult students as the more traditional marketing activities cited above. Service management, as defined by Albrecht (1988, p. 20), is "...a total organizational approach that makes quality of service, as perceived by the [student], the number one driving force for the operation of the [institution]."

Raymond W. Campbell, Ph.D., Chairman, Department of General Studies, College of Allied Health Sciences, Thomas Jefferson University, Philadelphia, PA 19107

Service management is a form of marketing that could assist institutions in making their environment more friendly (i.e., responsive) to the adult learner. In light of the expected downturn (Dodge, 1990, pp. A1, A31-32) in freshman admissions over the next few years, this rehabilitation of the educational culture represents a new approach to enhance and consolidate institutional recruitment and retention efforts.

The adoption of a service management philosophy and its concepts offers the opportunity for institutions of higher education to go beyond traditional marketing to ensure that adult students achieve their educational goals. Following is a review of the philosophy and several key concepts of service management that continuing higher education administrators can implement to enhance adult participation. The paper is organized in four sections: A Few Facts About Service in Today's Economy, Why An Institution Should Invest Time and Money in a Service Management Program, How to Implement a Service Management Program, and Conclusion.

A Few Facts About Service in Today's Economy

As indicated in the definition above, service management focuses on quality of service as it occurs between the customer-contact person (e.g., student financial aid officer) and the consumer (i.e., student). The emphasis is on the "how" of what transpires between an organization and the people it serves. This does not imply that the "what" (the actual product or service) is disregarded. Rather it points out that the quality of the delivery of the product or service is of the same quality as the product or service itself.

In an increasingly demanding higher education market, service management may be the competitive edge needed to attract and keep adult students, as well as to build long-term relationships with them. In Thriving on Chaos, Peters (as cited in Shulse, 1989) summarized the key ideas to attaining the competitive edge:

- Understand the customers' perceptions about service, and then become a "service fanatic."
- Consider each as a lifelong customer who will in turn tell many others, so look at the long-term relationship.
- Pay careful attention to the intangible attributes of the service.

The simple fact is that higher education institutions have to give today's students a quality education in the broadest sense of the term. Students, and adult students especially, expect to be treated like individuals--with courtesy, concern, competence, and genuine caring.

Research on the relationship between customer complaints and word-of-mouth communication, reveals some interesting findings. Approximately 70 percent of the customers who experience problems with the products or services they purchase never complain to the companies that produce the product or offer the services. Many of these consumers simply take their business elsewhere. On the other hand, many of those who do complain about their purchase-related problems and have them resolved satisfactorily have indicated they would in fact continue to purchase the offending product or service. Where complaints are not handled satisfactorily but are handled nevertheless, a smaller percentage of consumers say they would continue to purchase the offending product or service. Results of these studies vary somewhat according to the nature of the product or service and its price (Technical Assistance Research Programs Institute, 1986, p. 38). Additionally, dissatisfied customers tell approximately twice as many people about their negative experiences, as satisfied customers tell about their positive experiences (Technical Assistance Research Programs Institute, p. 50).

Complaints from dissatisfied customers tend to cluster around seven types of behaviors: apathy, brush-off, coldness, condescension, robotism, rule-book, and runaround (Albrecht, 1988, pp 14-16). Examples of how each applies to continuing higher education can be given as follows:

> Apathy: The administrator who fails to respond to a letter of complaint from a training director of a company with whom the college has just delivered a six-month management program for supervisors.
>
> Brush-Off: The bookstore manager who tells students that the textbook is out of stock, does not know when more copies will come in, and blames the continuing education director for not ordering enough.
>
> Coldness: The secretary in the student financial aid office whose unfriendly manner clearly communicates that students are interrupting her "real" work.
>
> Condescension: The evening instructor who informs students on the first night of class that in last term's course, only nine of the original 40 students passed the course.
>
> Robotism: The secretary who tells everyone to "Have a nice day" without any corresponding genuineness (verbal and nonverbal).
>
> Rule-Book: The admissions officer who informs the older female applicant who has been out of school for over 10 years that she will have to take the Scholastic Aptitude Test.
>
> Runaround: The faculty advisor who send his part-time student to the chairman of another department for permission to substitute a program requirement. The chairman refers him back to his faculty advisor for approval, who in turn sends the student to the transfer counselor in the admissions office.

Why An Institution Should Invest Time and Money in a Service Management Program

Typically whenever adult students visit a college or university they come into contact with more than one person and one office. These various contacts or interactions help to form a collective image in the student's mind about the quality of service. In the literature, these points of contact are often referred to as "moments of truth" (Albrecht, 1988, pp. 26-36). In serving adult students, a continuing higher education administrator must remember to keep in mind a "cycle of service" perspective (Albrecht, p. 35).

The case of a 28-year-old single mother returning to education for the first time since her high school graduation, brings this concept to life. As she enters the campus, her first contact is with a security guard who directs her to the visitor parking lot near the academic advisement center. She goes to meet with her advisor and works out a program of study. She leaves the academic advisor feeling good about herself and her new educational opportunity. Next she proceeds to the evening registration office to sign up for her first college course. Because she has been away from school for so many years and wants to do well, she decides she will purchase the textbook immediately rather than the next week when classes begin to get a headstart on the course work. However, when she inquires at the bookstore, a clerk informs her that the book is out of stock and is not expected for several weeks. At this point, the woman begins to feel anxious.

The point of this brief scenario is to highlight the importance of each "moment of truth" in the student's series of interactions with the institution. A single negative experience in the continuum may be sufficient to discourage a prospective student from enrolling and/or continuing her educational plans. By paying close attention only to those areas for which they are directly responsible, continuing higher education administrators will not observe those discrete events, each critical in itself, that comprise the student's cycle of service.

Another way of realizing the importance of service management for continuing higher education is to think about what a single student can mean financially. A part-time student who graduates with a baccalaureate degree from a private institution offers the following income profile (excluding inflationary increases for tuition):

8 courses per year for five years (120 credits) @ $500.00 per course	$20,000
Years 1-10 of alumni giving @ $100 per year	1,000
Years 11-20 of alumni giving @ $200 per year	2,000
Years 21-30 of alumni giving @ $300 per year	3,000
Sends two children to alma mater 8 years @ $18,000 per year	144,000
Refers two other students to alma mater 8 years @ $18,000 per year	144,000
Total	$314,000

In yet another way, the above example reminds us that continuing higher education administrators really work for the students. While many continuing higher education administrators report to a dean, vice president or president, it is the students who really determine their futures. Consequently, ascertaining the needs of students and the personnel who frequently interact with students should be a top priority of the managerial decision-making process.

One way to think about this facet of the service management philosophy is to picture an inverted pyramid of authority (Albrecht, p. 107). Conceptualizing the organizational hierarchy in this inverted way shows the organization as customer-oriented, not provider-determined. Easy to understand, this model is not easy to implement. Because a service management program encourages more employee autonomy and places managers or administrators in less directive roles, it requires increased cooperation between management and employees. For higher education, that translates into greater decision-making power being deliberately placed in the hands of student-contact personnel. The proven basis of this redistribution of responsibility is that students are more satisfied when colleges respond to their concerns quickly. The reverse is just as true when schools are less responsive, students turn away, drop out, or go elsewhere.

How To Implement a Service Management Program

A successful service management program involves five basic stages, from close appreciation of clientele to integration of principles into the job reward system (Albrecht, pp. 144-156). A carefully planned and consistently executed campaign of customer research, strategy, training, implementation, and consolidation is required to insure an effective program. Because the service management approach is a comprehensive one, its implementation must be broad-range. This cannot be thought of as a "piecemeal" solution to endemic institutional problems.

Understand Your Customer

As a first step toward implementing a service management program, continuing higher education administrators must implement a systematic plan to gather information from their customers. "Customers" here refers to the institution's external customers (i.e., students) as well as its internal customers (i.e., employees). This process can include student evaluations of teaching, employee and student focus groups, in-depth interviews of employees and students, and follow-up surveys of alumni. The key to this initial step is establishing a data-gathering component that is planned, systematic, and frequent. Faculty would naturally be considered one of the continuing higher education administrator's groups of customers, in turn serving as important customer-contact personnel for the institution.

Clarifying the Service Strategy

After the information in the first stage has been collected and analyzed, the continuing higher education administrator should then conduct a retreat with the key personnel in the unit to devise a service strategy. According to Albrecht:

> A service strategy is a distinctive formula for delivering service; such a strategy is keyed to a well-chosen benefit premise that is valuable to the customer and that establishes an effective competitive position. (p. 172)

Educate the Institution

Having devised a service strategy, the next step is to make sure that the operation of the unit is in keeping with that strategy in the broadest sense of the term. First and foremost, the strategy must be communicated to all unit personnel.

Faculty and student affairs personnel are two groups of individuals with whom students interact frequently. Because both groups enjoy some degree of professional autonomy in their roles, it is difficult to maintain very much control over the quality interactions that occur between them and the students they serve. One way the basic concepts of service management can be communicated to faculty is through a faculty development program. Two instruments to advance the thinking of faculty, administrators, and staff in this area are "Seven Principles for Good Practice in Undergraduate Education (Institutional and Faculty Inventories) and the Postsecondary Education Institutions and the Adult Learner: A Self-Study Assessment and Guide.

Activities in this stage include: designing a training program, designing training materials, conducting training and developing institutional communications. This last element, developing institutional communications, is most important for ensuring that the strategy is kept uppermost in the minds of the customer-contact personnel.

Implement Grass-Roots Improvements

In very large continuing higher education units, it may be necessary to implement the service management program in each of the sub-units one by one. In smaller continuing higher education units, implementation of the program can probably be done all at once. Because a service management program entails broad-spectrum change in the organizational way of doing things, it is a good idea to incrementalize the implementation process. Data gathering continues to be an integral part of each stage in the process. As improvements are implemented, systematic evaluations of effectiveness should be conducted and the results of these evaluations shared with the appropriate personnel. If deficiencies are revealed, follow-up training must be provided.

Make It Permanent

In order to make improvements permanent, changes will also have to be made in the institution's reward system. Expected service management behaviors and attitudes must be included in the employees' performance objectives to reinforce their importance. Employees can only believe that the service management program has the support of the administration when it is directly linked to the institution's reward system.

Conclusion

Implementation of a service management program represents nothing less than a major change in the institution's culture. An institution undertaking such a step is essentially attempting to ensure that the delivery of its product (i.e., education) is assigned the same level of importance as the product itself. While such a distinction may seem artificial, numerous examples from business and industry show that good service contributes to company success in the form of retention of customers, increased revenue and improved quality and efficiency (United States Office of Consumer Affairs, p. 10).

College and universities considering the establishment of service management programs will undoubtedly meet with some resistance. Some faculty and administrators may even perceive such efforts as attempts to establish a "groupthink" way of operating. A deliberate and careful introduction of service management should help to alleviate such resistance. As a way of behaving and thinking, service management re-encourages every employee in the institution to develop a heightened sense of pride and integrity in his/her job. In one sense, it requires employees to listen proactively to their customers, managers to listen proactively to their employees, and both groups to respond promptly to matters of concern.

While there may be some limitations in the ways this overarching concept can be adapted to higher education, there are plenty of individual components that institutions can employ or at least begin to consider. Specifically, continuing higher education units can pay more attention to their dissatisfied, as well as their satisfied, customers. The cycle of service and the inverted pyramid should be retained in long-term memory as constant reminders of those continuing higher education administrators are here to serve. Finally, communication up and down the hierarchy is always indispensable to institutional success. In service management, it takes on an even more central role.

At a time when competition for students seems to be intensifying and the projected work force demands of the 21st century are fast approaching, service management challenges continuing higher education administrators to deliver higher education to adult students with a quality second to none.

References

Albrecht, K. (1988). At America's service. Homewood, IL: Dow Jones-Irwin.

Albrecht, K., & Zemke, R. (1985). Service America. Homewood, IL: Dow Jones-Irwin.

Brooks, L.R. (1989, August). The applicability of service marketing principles to student recruitment. Paper published by the American Association of University Administrators Foundation, Tuscaloosa, AL.

Bucher, J.E. (1989). Customer service techniques. Unpublished Manuscript. University of South Dakota, Computer Center, Vermillion, SD.

Chickering, A.W., Gamson, Z.F., & Barsi, L.M. (1989). Seven principles of good practice in undergraduate education (faculty and institutional inventories). Racine, Wisconsin: The Johnson Foundation, Inc.

Cookson, P.S. (1989). Recruiting and retaining adult students. New Directions for Continuing Education, (Serial No. 41).

Desatnick, R.L. (1988). Managing to keep the customer. San Francisco, CA: Jossey-Bass.

Dodge, S. (1990, February 28). Many colleges report dip in applications. The Chronicle of Higher Education, pp. A1, A31-A32.

Every Person is Important. (1989). Pasadena Weekly Journal of Business, 155 S. El Molino Avenue, Suite 101, Pasadena, CA 91101.

Lederman, D. (1990, March 7). College recruiting gimmicks get more lavish as competition for new freshmen heats up. The Chronicle of Higher Education, pp. A1, A34.

Magner, D.K. (1989, November 8). Many colleges report enrollments have increased, some report progress in finding minority students. The Chronicle of Higher Education, pp. A37-A38.

Marchese, T. (1989, April). [Interview with David Seymour, visiting scholar of Higher Education Research Institute at UCLA]. AAHE Bulletin, pp. 3-7.

The Pew Higher Education Research Program. (1990). Profiles: enrollment trends. Policy Perspectives 2 (Serial No. 2).

Postsecondary education institutions and the adult learner: a self-study assessment and planning guide. (1984). Washington, D.C.: Commission on Higher Education and the Adult Learner of the American Council on Education

Shulse, J.A. (1989). *Retention marketing: customer service* (Research Report No. 80). Manhattan, Kansas: Learning Resources Network.

Technical Assistance Research Programs Institute. (1986). *Consumer complaint handling in America: an update study (Part II)*. Washington, D.C.: United States Office of Consumer Affairs.

United States Office of Consumer Affairs in Cooperation with Chevrolet Motor Division, General Motors Corporation. (no date). *Increasing customer satisfaction*. Washington, D.C.: United State Office of Consumer Affairs.

THE ACHIEVEMENT GAP OR MANY START BUT FEW FINISH: METHODS OF ACHIEVING A SIGNIFICANTLY HIGHER COMPLETION RATE FOR STUDENTS ENROLLED IN INDEPENDENT STUDY COURSES

Charles E. Carlson
Ann Marie N. Bridges
Elizabeth A. Hansen

Introduction

More than 250,000 adults take courses for credit through independent study divisions of NUCEA member universities. (1) Yet, many students who register for an independent study course fail to complete it. They withdraw or they take a permanent incomplete grade. To take learning seriously, we must try to increase the student's chances of completing an independent study course. One approach that has been successful is being used presently at Central Michigan University. The model which contributes to the rising completion rate will be described and the components will be analyzed in respect to completion rates beginning with the year 1985 and continuing through the Fall 1989 semester. This will be presented in the context of the total Individualized Undergraduate Degree Program.

Background

The development of the British Open University in the late 1960s ushered in the era of the external degree program. Soon thereafter it became a model which a number of American postsecondary institutions tried to emulate. Built upon the perception that there were literally millions of working adults who had a need for further education, either to enhance their skills or to prepare them for a new career, colleges and universities throughout the nation began the process of creating programs which would serve this otherwise educationally disenfranchised population. Although individual institutions took different approaches to the delivery of instruction, most included some manner of individualized, independent study. In the case of Central Michigan University, this took the form of the Individualized Undergraduate Degree Program developed by the Institute for Personal and Career Development (IPCD).

Charles Carlson, Asst. Director Undergraduate Programs, Central Michigan University
Ann Marie N. Bridges, Mgr. Office of Independent Study, Central Michigan University
Elizabeth A. Hansen, Instructional Designer, OIS, Central Michigan University

Central Michigan University is a regional, state supported institution whose service area in the context of continuing and adult education encompasses the Northern half of Michigan's Lower Peninsula. In developing a system to deliver a baccalaureate degree to a widely dispersed, isolated population, it became immediately apparent that courses would have to be delivered by means other than the traditional classroom based instruction. To this end, the IPCD embarked upon a project that would result in the creation of mastery based Learning Packages which would become the foundation of the external baccalaureate degree.

Learning Package Courses

The standard correspondence course system was functioning well at Central Michigan University, but it was determined at the inception of the Individualized Undergraduate Degree Program that a mastery-based system of independent study would better correlate with the objectives of the new degree program.

Extensive pre-planning and organization took place which eventually determined the first learning packages to be developed. A core group of CMU faculty and a team of instructional designers convened in a workshop setting several times to define exactly what should be contained within each learning package, how they were to be developed, and, finally, how they would be delivered to the end-user, the student. Through the years, enhancements, improvements and major changes in design and course content of the Learning Packages have all contributed to the successful educational pursuits of the independent study student.

The current Learning Package courses are based on a 16-week term-driven completion period, but mastery must be obtained in 32 weeks or the student ends up with a permanent Incomplete or failing grade. They are developed by faculty content specialists and an instructional designer and conform to specific learning objectives, which are tightly correlated with readings, exercises/activities, self-diagnostic tests, and examinations. Students are required to pass the proctor-monitored objective-type unit examinations at a minimum mastery level of 70 percent before proceeding on to the next unit of study. Should a student fail to meet this mastery level, she or he is required to cycle through the unit again, reviewing the material before taking another form of the examination. Each examination is sent to the Office of Independent Study for evaluation, and the pass/retake results of the exam are conveyed to the student via telephone. The student is mailed an item analysis of the test items missed, so that she or he may refer back to the specified learning objectives for re-study purposes. A suggested examination schedule is included in each learning package course which serves as a pacing mechanism for the student.

Description of the Model

The CMU model is comprised of three elements. The first element of the new system is the academic advisor who personally contacts those students who are not on track or who are in academic distress. The second element involved the development of a two semester hour course required of all incoming students called the Adult Learning Seminar. This learning experience bonds the students to the university, creates a sense of community between the participants, and finally, lays the groundwork for a system of communication between the university and the student through the academic advising staff. The third element was the implementation of a more effective system for monitoring the student's progress throughout the semester including a mid-term progress report to each student.

The Academic Advisor and the Adult Learning Seminar

During the first decade of its existence the administration of the Individualized Degree Program devoted its energies to the recruitment of students and the development of Learning Packages and other means of delivering instruction. Less emphasis was placed on student completion rates both in terms of Learning Packages, and ultimately, graduation. Indicative of this is the fact that beginning in 1973 and continuing for a ten-year period, 181 (13.7 percent) students graduated out of a total of 1320 who were admitted. As a point of comparison the external classroom based program offered by CMU in the Detroit area admitted 1024 of which 268 (26 percent) graduated.

Realizing the implications of this track record, a change of emphasis was deemed necessary. Although still maintaining Learning Package development at then current levels, this policy stressed providing the means to increase student completion rates. To this end, two components were put in place. First, the Office of Undergraduate Programs moved from contracting part-time, adjunct advisors to employing full-time academic advisors whose main function was to design a program plan and guide each student through his/her program via telephone, by mail or in person. Advisors, reporting to the Assistant Director for Undergraduate Programs, were to be proactive rather than reactive in their relationship with their students, especially with those in academic difficulty. These advisors were to be accessible during the business day and they were expected to travel to various locations around the state so that on-site advising was available periodically. In this context, the academic advisor assumed a very close mentoring relationship with each student, offering encouragement, prodding when necessary, sympathy if needed, and, most importantly, cutting red-tape when the student became entangled with the complex and sometimes conflicting bureaucracies that control the university and its students.

The second component resulting from this change in policy involved the creation of the Adult Learning Seminar. One of the major obstacles facing the non-traditional student returning to school after a long absence is the concomitant anxiety caused by his/her fear of failure. This fear can be compounded for the individual who embarks on a program that is delivered by various means of independent study. The student does not have the discipline of the classroom to hang onto nor the structure provided by the instructor on a regular basis. Finally, this independent study student does not have the interaction with other students which serves as a sounding board for ideas as well as a source of information and help when needed.

In order to provide a means to overcome, or at least, alleviate these obstacles as threats to success, the Institute for Personal and Career Development developed the Adult Learning Seminar which would provide the adult student with an awareness and understanding of the learning process, the confidence necessary to increase their abilities to learn in a variety of situations, and a way to maximize their past life experiences in achieving their college level goals.

This two-hour course, required of all incoming individualized undergraduate degree students, brings students to campus for three Saturdays each semester. Conducted for the most part by regular CMU faculty, the first eight-hour Saturday introduces the participants to the university, the program advisors and administrators, and the Learning Package faculty. Students need not be admitted before attending the first session of the seminar, although in practice, most have already been admitted. Those who seek admission are provided with the necessary materials in order to do so at the end of the first session. Those who decide that, perhaps, the program is not what they are looking for return home with a free lunch under their belt and no further obligation. Two weeks later the students admitted to the program return to campus for the second session of the seminar. Six weeks later they return for the third and final session having spent the intervening time working on various assignments including representative portions of the Prior Learning Portfolio.

The first pilot offering of the Adult Learning Seminar occurred in the Summer of 1985 and has since become a regular on-going part of the Undergraduate Program. The Adult Learning Seminar and the academic advisors comprise the first and second components put in place to assist the student toward the completion of the baccalaureate degree. The third component, monitoring and feedback, works in conjunction with the academic advising component.

Monitoring of and Feedback to Learning Package Students

The Independent Study distance learner must be motivated to complete courses through this method. Many are self-starters, but keeping their commitment to complete and their enthusiasm level high needs reinforcement. Various means of providing positive reinforcement are built into the monitoring program.

Students are encouraged to write comments on their test/assignment cover sheet. Depending on the question or comment, the grades clerk will pass it along to the instructor or the instructional designer for a reply, and will at times add a little personal note of encouragement or recognition when the reply is returned to the student.

A mid-semester status up-date is issued to each student enrolled in a learning package course. In addition, Undergraduate Program advisors and instructors receive copies of examination results and individual student statistics gleaned from the mid-semester up-dates. Advisors also receive another update approximately two-thirds of the way through the semester. The advisors use these reports as a basis for encouraging students with their course work. Should some students find themselves unable to complete the course in the 16-week semester, they may request an additional 16-week extension from the instructor, provided a minimum of 50 percent of the course requirements have been satisfied. Those qualifying for the extension receive an Incomplete grade at the end of the 16 week semester.

Students completing the course receive a congratulatory note from the Office of Independent Study when the results of the last exam or assignment are returned to the student. Those students completing the course requirements prior to mid-semester are also recognized with an "early completion" certificate, and are listed in the "Kudos Kolumn" in the Opportunity, the Undergraduate Degree newsletter.

Results of the Model's Application

The following data is based upon student completion rates from Summer 1985 to Fall 1989. Students who withdrew, and those receiving permanent Incomplete grades were not counted in the following percentages. It should also be noted that the participants in these early seminars did not begin filtering into the actual enrollment patterns until the Fall Semester 1986. The Percent Completing column includes students who completed in the 16 week period and those who needed extensions and completed in 32 weeks. After 32 weeks, if the student did not complete the course requirements, a permanent Incomplete or a failing grade would be the final grade for the course.

Student Completion Rates for Learning Packages

Semester	Number Enrolled	Percent Completing
Summer 85	196	73%
Fall 1985	190	75%
Winter 86	145	75%
Summer 86	167	74%
Fall 1986	289	81%
Winter 87	281	83%
Summer 87	187	84%
Fall 1987	326	75%
Winter 88	362	85%
Summer 88	323	78%
Fall 1988	415	85%
Winter 89	514	85%
Summer 89	404	88%
Fall 1989	462	82% *

* as of 3/14/90, the end of the 32-week extension is 4/13/90

As can be seen from the above figures, completion rates began to rise with the implementation of each successive component with two exceptions. There were significant decreases in Fall 1987 and in Summer 1988. In each instance the declines coincided with periods of administrative dislocation which interfered with the effective utilization of the monitoring processes which were in place. In the case of the 1987 decline, the Undergraduate Degree program underwent a rather traumatic personnel situation accompanied by the dislocation caused by a massive remodeling project undertaken by the College of Extended Learning. The 1988 decline came at the same time as a total reorganization of the Institute for Personal and Career Development and the College of Extended Learning.

The monitoring and feedback mechanisms in the model were fully operational after Summer of 1988 when the program implemented the computerized test evaluation procedure and began telephoning examination results to students.

This data indicates that the three-fold approach of the model is showing results. The monitoring and feedback mechanisms are constantly being revised and improved as we continue. By using a variation of the mastery learning concept, students are stimulated into mastery to enhance their learning. The program and the materials are designed to compensate for the lack of the classroom experience. Together, they synthesize the most positive qualities of the course and yet provide flexible study time for the distance learner.

Conclusions

The CMU model is "taking learning seriously" as we focus on meeting the needs of the adult distance learner. We concur with the hypothesis stated in the study by Torstein Rekkedal (1981), that:

> "Statistically, if the educational system basically is sound, we believe that any real improvements in quality regarding educational methods, media, presentation, administration or counseling will result in increased study persistence and/or a reduced dropout rate, and that both results must be looked upon as positive effects." (2)

Notes

1. Moore, Michael G, "Distance education: A learner's system," Lifelong Learning: An Omnibus of Practice and Research 12, No. 8 (1989): p. 8.

2. Rekkedal, Torstein, "Introducing the Personal Tutor/Counselor in the System of Education. Project Report 1: Experiment Description," paper presented at the Annual Conference of the European Home Study Council, Madrid, Spain. (1981): p.12.

MINORITY FACULTY DEVELOPMENT: MAKING THE COMMITMENT

Donald C. Dendinger
Joseph A. Valades

Introduction

Recently several sources have suggested a renewed effort to recruit minorities into higher education. Education Secretary Lauro Cavazos set a goal of decreasing by half the difference in degree-completion rates between minority students and all students (DeLoughry, 1990). President Robert Atwell of the American Council on Education urged increased minority representation in every sector of our colleges and universities--in student bodies, on faculties, and as administrators and staff (Educational Record). However another current report states the following. "While much can be done to improve retention and degree-completion rates, the groups in the American population that have the greatest potential for demographic growth (Blacks, Hispanics, and Native Americans) historically have been the least likely to persist and to complete a bachelor's degree" (Wilson, 1990). The above examples are all current commentaries on the state of minority representation in colleges and universities. The awareness seems to be present, yet the solutions remain elusive.

Certainly, all the routine efforts at affirmative action hiring and aggressive recruiting of students, faculty, and staff are important. However, even with these efforts, it appears that minority representation is at a stand still or is regressing. It is suggested that dramatically more effective strategies are needed. Thus, it was encouraging to note that President Bush in his state of the union address specifically mentioned additional funding for the Head Start Program. Without an early and successful start for minority children, the pipeline narrows and the numbers available for secondary and post secondary education are sparse.
Additionally, there are early intervention programs initiated by colleges and universities which monitor and motivate high school age students to enter colleges and universities. Such a program was presented last year at this conference (Dvorkin, Baskind, Thiel, 1989) (Southern Connecticut University Program). Given the complexity of the problem and the need to address the issues at many levels, it is important to develop a strategy at all levels, from prenatal care to Head Start through college and university levels, in order to encourage and effectively support minorities throughout.

Donald C. Dendinger, Chair, and Joseph A. Valades, Instructor, Goodrich Scholarship Program, University of Nebraska at Omaha, Omaha, Nebraska
a, 68182-0208

The focus of this particular presentation will be on the college and university level intervention, keeping in mind the need to address the problem at all the previously mentioned levels. With the premise that minority faculty members are needed in all our institutions, the University of Nebraska at Omaha has developed a Minority Faculty Development Program. What follows are the steps taken in the development of this program, one minority faculty participant's observations thus far, and a sample of the program contract.

The first step in this process of recruiting a minority into the Minority Faculty Development Program is to seek departmental interest and approval. In the College of Public Affairs and Community Service, which is comprised of Social Work, Criminal Justice, Public Administration, Gerontology, and the Goodrich Scholarship Program, there is generally a keen interest in this project, simply because of the type of students and faculty these departments draw. Therefore, four departments readily agreed to participate in this project. Social Work, Criminal Justice, the Goodrich Program, and Public Administration identified a potential faculty member who already had a masters degree in an appropriate field, along with teaching and/or work experience which suited them for a faculty position. In other words, there was a known professional, interested in becoming a faculty member, who was recommended by the department to begin work on a doctorate while teaching at the university.

The next step was to negotiate a standard contract with each individual recommended by the department. Generally, the terms of the contract included the following items: the person had to be a minority; he or she would need to be accepted into an appropriate doctoral program at the beginning of the contract; the faculty member would be required to teach six hours of classes per semester, while taking up to six hours in the doctoral program; and the salary would be commensurate with a beginning level instructor or assistant professor, with support given for tuition and released time for course work. The expectation is that the faculty member would complete the doctoral level work within four years and then would be moved into a full-time, tenure-track faculty position within the department. An example of a typical contract is attached at the end of this paper.

Minority Faculty Observations

In making my observations of this program, I will address some key questions as posed by my co-author, Dr. Dendinger, and myself. The questions are as follows: 1) How, and from whom, did you find out about the Minority Faculty Development Program? 2) Would you currently be in a doctoral program if you were not in the Minority Faculty Development Program? 3) What do you identify as the advantages and disadvantages of this program? 4) What are the predictions for your success under this program?

I was a staff person in student services (within the Goodrich Scholarship Program at the University of Nebraska at Omaha) when I first heard of the Minority Faculty Development Program and the initial attempts by the College of Public Affairs and Community Service (CPACS) at recruiting minority students into doctor al candidacy. Having just completed my Master's degree in Social Work, I had pretty much resolved that my days of higher education, other than continuing education units, were completed. With time (3 years), I came to acknowledge the value of a Ph.D. in a university setting, as it was pretty much the expectation that one in my position would eventually pursue the doctorate. Likewise, the continued encouragement of my colleagues to pursue this path was not only positive but also motivating. Therefore, after three years of counseling students (frequently under intense circumstances) and two semesters of part-time teaching on the side (which I found quite fulfilling), I chose to begin my doctoral work. There I found myself reaching a larger group of students at one time in the classroom and preferring it to the ongoing counseling setting.

Regarding question two, I would certainly not be in the doctoral program now were it not for the Minority Faculty Development Program. As a university staff member, I have had the opportunity to take graduate/post-graduate classes under UNO's Employee Scholarship (which includes remission of tuition and fees), even though I have taken only one course as such. However, the Minority Faculty Development Program affords me the opportunity to attend classes under a more flexible schedule because, as the contract specifies, I have been appointed as a part-time instructor. Also, my part-time faculty salary is competitive with my previous full-time staff salary. Ultimately, my completion of the Ph.D. will result in an appointment to a tenure-track faculty position--an option not available under the Employee Scholarship.

As for the advantages and disadvantages of this program, I have perhaps identified a number of them already. At this point I recognize the following advantages: the program pays for all tuition and fees, books, travel expenses (I attend the neighboring University of Nebraska-Lincoln campus, as doctoral courses are not offered at UNO), and an annual salary; upon completion of my doctorate, I will be eligible for a tenure-track position with the university; outside of class time and office hours, my schedule is flexible enough to allow me adequate time to attend classes; and the support of my colleagues is a key motivational factor. This last point is quite significant because of the ongoing insights I have gained from it. As I previously mentioned, it was an expectation that I would eventually pursue the doctorate. It became clearer to me that these expectations on the part of my colleagues were also subtle messages of their confidence in my abilities to eventually join them in the ranks of professorship. In all honesty, as much confidence as I have had in my academic and professional abilities, and as much as I have tried to mentor the importance of self-confidence and success to the many students that I have counseled, I had never really envisioned myself as being a professor in an urban university. This reality empowers me both as an individual striving for self-actualization and as a member of an academic team that maintains a genuine concern and confidence in its players.

The following are the disadvantages of the program: despite the flexibility of my schedule, I frequently find myself in the "time crunch" in terms of teaching, attending classes, advising students, and attending to my personal life; and as a student participating in a program specifically targeted for minority individuals, I occasionally find myself in a struggle of identities as to whether I am given this opportunity because of my academic/professional abilities or my ethnicity. This latter point has been a personal and professional issue with which I have internally struggled, along with numerous other minority students, ever sine I began working with the Goodrich Program in 1986. Much of this struggle seems to focus on what might be considered the negative arguments regarding affirmative action, including the aspect of tokenism. That is, am I in this teaching position because I am the best qualified or because I fill the minority quota? Even in meeting with my doctoral supervisory committee, I was strongly advised to strengthen my coursework in the area of sociology (my emphasis is in social foundations in educational curriculum and instruction) so as to establish my credibility beyond being merely the "in-house Chicano who knows ethnic studies." Thus, there appears to be a double message in that my presence and input may be valued by the university system for affirmative action purposes but not for any academic purposes. I happen to think that I bring a unique perspective to my work setting in terms of how I relate to people and my thinking processes. However, I strongly sense that others do not see this value. Thus, I very much applaud the systemic changes this program seeks to create by bringing more minorities into the faculty ranks; however, I cannot see what effect it will have for other minorities if the aspect of ethnicity is squelched by the overall university. My ethnic self still wanders through a labyrinth of identity that this program for all its best intentions, cannot begin to penetrate and which the university seems to ignore.

As for the predictions for my success in this program in completing my Ph.D., I have every confidence that I will one day achieve that goal. As mentioned, I have adequate support in the areas of finances, colleagues, classmates, and administration (CPACS)--ingredients that certainly increase my chances for success. Most importantly, I have the desire to bring a perspective to academia that acknowledges the value of minority issues and provides a model for other aspiring minorities to follow.

Conclusion

Clearly a major challenge faces institutions of higher learning in regard to minority recruitment and retention at all levels. This conference, as well as other sources, identify models of intervention at various levels in order to increase minority representation in colleges and universities. The Minority Faculty Development Program is one model which appears to be effective in recruiting minority faculty into tenure track positions. Further monitoring of this program will attest to its eventual success at the University of Nebraska at Omaha. It may well serve as a practical and effective model for other institutions as well.

Minority Faculty Development Sample Contract

I am pleased to offer you the following appointment at the University of Nebraska at Omaha

Type of Appointment:	"Special"--August 21, 1989 to May 18, 1990 (.75 FTE).
Rank:	Instructor, Goodrich Program.
Salary:	$24,000 to be paid in twelve (12) monthly installments (September 1989 through August 1990).

As part of our Minority Faculty Development Program and depending upon satisfactory performance in instruction and satisfactory progress toward completion of the doctorate, this "special" appointment is a faculty appointment which may be extended for a period of four additional academic years. Each year we will make a decision regarding reappointment no later than April 15. A decision concerning your return to a position as a professional staff member with the college must be made no later than April 15, 1990. The special term appointment will be converted to a specific term appointment with one year of service counted toward continuous appointment when you reach ABD status on your doctorate. Under the terms of this appointment you will be eligible for yearly salary increases under the terms applicable to other regular, part-time faculty. The .75 FTE may be adjusted depending upon the needs of the Goodrich Program and upon the status of your doctoral work.

I am enclosing a statement from Dr. Dendinger which outlines your initial assignment. I also am enclosing a copy of the Bylaws of the Board of Regents of the University of Nebraska.

It is necessary that this offer is contingent on approval and formal appointment by the Board of Regents of the University of Nebraska. While we have every reasonable expectation that they will act favorably upon our recommendation that you be appointed in accordance with the stipulations contained herein, only the Board has authority to make appointments. Upon formal appointment by the Board, a copy of the official Personnel Action Form will be sent to you.

As part of the Minority Faculty Development Program, this offer is contingent upon your acceptance into an acceptable Ph.D. program.

Your written acceptance of this offer should be indicated by signing and returning the enclosed copy of this letter. Should you have any further questions, or find the terms unacceptable, please contact me or Dr. Dendinger by letter or telephone as soon as possible.

Sincerely,

David Hinton
Dean

I accept the terms of appointment as described in this letter and acknowledge receipt of a statement of initial duties and a copy of the Bylaws of the Board of Regents of the University of Nebraska.

Assigned Responsibilities and Duties

TEACHING:	Nine credit hours equivalent course load each semester.
DEPARTMENTAL:	Undergraduate advising as determined by the Director of the Goodrich Program.
UNIVERSITY:	Committee assignments as requested by the Director of the Goodrich Program and/or the Dean of the College.

REFERENCES

ACE Minority Concerns Report. Educational Record. Summer/Fall 1989. p. 79

Clewwell, Beatriz C. and Flecklen, Myra S. Research Report : Improving Minority Retention in Higher Education: A Search for Effective Institutional Practices. Educational Testing Service, Princeton, New Jersey. June, 1986.

DeLoughry, Thomas J. (1990, January 31). Chronicle of Higher Education , p. A20.

Dvorkin, Stephen, Baskind, Frank R., and Thiel, Robert. (1989). Early Outreach Recruitment of Minority High School Students. In Reithlingshoefer, S.J. and Sanford, J.F.(Eds.) Proceedings from the Seventh Annual Conference on Non Traditional and Inter-disciplinary Programs . (pp. 535-539) Virginia Beach, VA. George Mason University.

Seventh Annual Status Report (1988) Minorities in Higher Edcuation American Council on Education. Office of Minority Concerns. One Dupont Circle, Washington, D.C.

Wilson, Robin (1990) February 21. Chronicle of Higher Education. pp. Al.

ADMISSION AND RETENTION OF THE ADULT LEARNER

Barry Karger
Gloria Dyer

In the confusing world of courses, curricula, and university requirements and regulations, the adult learner needs an understanding, guiding hand to ease the way through the academic maze. The first person the adult learner meets in the ,pursuit of a college degree may very well determine the student's success during the course of his or her college experience. At Fairleigh Dickinson University, the Campus Coordinator for the Success Program is the primary contact person for most adult learners.

The Success Program started in Fall 1985 with 26 students. Currently we have an enrollment of 523. The program allows students to get credit for up to 30 credits of life/work experience. These credits are usually given through the portfolio assessment process and are absolutely free. Students can also achieve credits through TECEP, CLEP ACT-PEP, and challenge exams, in addition to any transfer credits they may bring into the University. The University does not offer a general studies program because we feel that adult students can be successful in any of the majors the University offers. Success students are registered in all of the University's colleges: Business, Science and Engineering, and Liberal Arts. The Success program is administered from the office of the Associate Vice President for Lifelong Learning Programs. The program's director handles the many administrative, recruiting, and fiscal duties associated with the program and directly supervises the campus coordinators. It is the campus coordinator who serves as the adult learner's first contact with the University.

Students usually are recommended to the program by the Admissions Office and set up an appointment with the campus coordinator for their home campus. Interviews are conducted on an individual basis, establishing initial rapport with the incoming or potential student. This initial rapport is critical if the student is to feel comfortable enrolling in the college. Students must feel free to express any anxieties or problems they may have in returning for an education. The one-to-one interview allows time for that, giving the student the feeling of support from someone interested in his or her personal welfare. The campus Coordinator's aim is the establishment of a confidential relationship that will last, throughout the student's time at the University. The student's intellectual and emotional reaction to that first interview will determine if he or she will attend our University and enroll in the Success Program.

Barry Karger, Coordinator, Success Program, Teaneck-Hackensack Campus, Fairleigh Dickinson University, Teaneck, New Jersey
Gloria Dyer, Coordinator, Success Program, Rutherford Campus, Fairleigh Dickinson University, Rutherford, New Jersey

In establishing that confidential relationship, the Coordinator first tries to determine the student's background and goals. If the student's background is not appropriate to the college environment, or if the student's goals cannot be met by the University, the student is so informed, and the interview ends with recommendations that the student try to fill gaps in his or her background or pursue his or her goal in an appropriate institution. If the student's background is well grounded enough to compete in a university environment, the student is then asked what field of concentration interests him or her. Although many students know what they would like to major in, many others are unsure or have misconceptions about what a major is or what they would like to do when they receive their degree.

Once a student's background and goals are established, the Coordinator informs the student of the opportunities the University, and specifically the Success Program, can offer. Many students are unaware of what constitutes a college education and are completely unfamiliar with the requirements for a degree. Even those with previous college experience must be reacquainted with school and reassured that the courses they may have taken years before can be applied, in many cases, to their current goal. Coordinators not only stress the advantages of the Success Program, they help the student bring educational goals into focus. Many times during an explanation of the advantages or disadvantages of various degrees, students discover that the major they had in mind is not what is really wanted. Student and coordinator, then plan a program which is not only beneficial to the student's long range goals, but one which will get the student a degree as quickly and easily as possible.

The ease of the admission process is also helpful in recruiting students into the program. Students must be over 25 years of age and have a high school or high school equivalency diploma. The admission form is a single page. No SAT or other admissions tests are required. Any transfer credits are evaluated by a special admissions officer, and a copy of what is accepted is sent to both the student and the campus coordinator on a checksheet that outlines all courses a student must take to graduate in his or her major.

The admissions process is very time consuming, but it is time well spent. Working closely with the coordinator, students develop a trust and respect for him or her. This high regard naturally extends to the institution, which has demonstrated to the student that he or she is an important participant in the pursuit of higher education, not just a number who pays tuition. At a critical time in the decision-making process, students learn that in this program there is someone to turn to, for advice and guidance. They are assured that the coordinator's office is open 12 months a year and that there will always be someone there to advocate for him or her. During this admissions interview, which usually takes from one half to one hour to complete, a student has the chance to get all questions answered. Once the interview is over, he or she knows that this is the place to come to when other problems or questions occur.

The bonding and confidence that develops between student and Coordinator "sells" the Success Program. Without this intensely individual approach to the admissions process, the Success Program would be like any other adult degree completion program. Through the office of the Success Coordinator, the adult learner, saddled with the many anxieties of competing in an alien environment with traditional students who all seem to know the ropes, finds a special place in the college world. He or she is made to feel like a welcome, respected, capable addition to the University. That is what has made the Success Program the fastest growing program at Fairleigh Dickinson University.

Once promises have been made to the student, they must be kept or the student is lost. This fulfillment is also in the purview of the Success Coordinator. It may be fairly easy to recruit students with a glib line; it is harder keeping them. Retention is a problem for all universities. At Fairleigh Dickinson, we have found that the personal approach to counselling can cut attrition to less than ten percent. Edward Williams College, the two-year degree granting unit of the University, instituted a guidance counselling system that cut its attrition rate from more than 50% to less then ten percent. It was discovered that when students had a specific person to whom they could turn for guidance and advice, the attrition rate fell. Students were more apt to take advantage of a counsellor to answer questions or solve problems when they had the knowledge that person knew and was genuinely interested in them and their progress. An advising center, staffed by counsellors with no previous relationship with or knowledge of the students they counselled, did not work. Students had no confidence in such a system and did not use it. Instead they left.

For the adult learner, this is even more important. Confused by university bureaucracy and a myriad of changing academic rules, always feeling slightly on the outside, the adult needs a confidante, someone they can turn to in times of confusion or academic trouble. As the Success Coordinator gained the confidence and trust of the adult learner in the admissions process, so that relationship is carried forward into the counselling mode.

It is unfortunate, but true, that a counselling, system wherein a student goes to a faculty member in the student's discipline does not work. Absorbed in teaching and research, many faculty members are not well informed of university policies; in addition, this counselling system was set up when the greatest proportion of students were 18-21-year olds going full-time during the day. The adult learner, on the other hand, is usually a part-time student who must work during the day. Finding a faculty counsellor at night when the, adult student is free is difficult, if not impossible. Students questions and problems do not disappear after five o clock or abate during the dog days of August. Success Coordinators are scheduled to meet students during days and evenings and are always available by telephone. Coordinators are also available through intersessions and during the summer. When registration period comes, the Coordinators schedule extra hours.

Because of their confidence in and personal relationship with the Coordinator, students will most, often choose a Coordinator over a faculty advisor. Since students records are kept in the Success office, it is easy for the Coordinator and student to plan a course of study. Our proposed on-line terminal will help facilitate the registration process with other offices in admissions.

Many times the Coordinator serves the student as a confidante. Adults sometimes need to be assured and reassured that the time and effort they are placing in their own educations is worthwhile; that they can still write a good paper; and that they can still learn. Many who were not good students in high school or college when they were 18 or 19 need to be reminded that they are different students now. As adults, they bring maturity, responsibility, and more knowledge to the classroom. In many cases, what the adult learner needs most is a pat on the back. The Coordinator is there to give it.

Of course there will be times when the Coordinator will not have an immediate answer to every question; but he or she is well acquainted with all areas of the university system and knows where to get the answer. This saves the adult learner a great deal of his most valuable commodity -- time. Nothing will lose an adult learner faster than being shuffled from office to office or being kept on hold while trying to find the answer to a simple question. These people face enough frustration in their jobs; they will not welcome it or put up with it in adult education. They are paying for a service and they expect value for their money. As one student told me "If it wasn't for the fact,that you run interference for me and make things so easy, I wouldn't be here."

A very important facet of the Coordinator's responsibility is his or her work with the student in preparation of their life/work portfolios. After a seminar during which all Success students are counselled on the preparation of their portfolios, the Coordinator may meet with individual students several times. Style, content, and presentation are all thoroughly checked. Advice is given on each request for credits, and portfolios are beaten into shape before they are submitted. All this effort is time consuming, but the net result is that 98 percent of all credits applied for are granted, which leads to another net result: very happy students.

Success Coordinators also participate in activities outside their offices in an effort to help retain the adult learner. Coordinators serve on the University Advisory Committee on the Adult Learner. This committee works with the administration and admissions office to help bring a more meaningful learning experience to the adult learner. For example, to help adults integrate into academic life, special sections of select courses have been set aside exclusively for Success students. These courses allow mature students to be with students of equal maturity who have the same special concerns about coming back to school and balancing their academic, work, and home lives. The Committee has just completed an Adult Learners Survey to find out more about the wants and needs of adult students and how well the University currently fulfills, these needs. It has also organized an annual Adult Learners Conference, inviting well known participants from the field of adult education and adult students to discuss their issues directly with the experts.

Fairleigh Dickinson's Success Program also turns out its own newsletter entitled "Success Stories." Not only does the newsletter keep students abreast of new academic policies and courses, it informs them of extracurricular activities sponsored by the "Successful Adults Club," a social organization formed by Success students.

The phenomenal popularity of the Success Program at Fairleigh Dickinson University can be traced directly to the initial and continued close personal contact between the Director and Coordinators of the program and the adult students. It sets this program apart form the faceless bureaucracy that serves no student well, but particularly encumbers the adult. Although this approach is labor intensive and consumes much more time than mass counselling would, the success of the program, both from the student, and the coordinator's viewpoint, is well worth it. For the Coordinator, there's the intellectual and emotional fulfillment of making a difference in the students' lives. For the student, there's the well earned achievement at the end of an academic road made easier by the presence of knowledgeable guide. Such success can only benefit the University as well, for in these days of declining enrollment among traditional students and increasing enrollment among adult learners, satisfied adult achievers make for a happy college.

SPECIAL NON-TRADITIONAL OR INTERDISCIPLINARY COURSES

SOCIOLOGY THROUGH COMPUTER APPLICATIONS: A SEMINAR WORKSHOP

Joseph E. Behar

Introduction

Academic computing and the use of information have become a prominent part of higher education and the undergraduate curriculum. Computing may be taught in conjunction with programming and computer science. Frequently students are offered the opportunity to explore computer applications through an introductory course in computer information systems (CIS). Most often these courses stress the technical or business side of computers, teaching a mixture of word processing, spreadsheets, and database applications (Behar and Hackett, 1988). In the social sciences and sociology, computers are not yet a major part of the undergraduate curriculum but applications are increasingly becoming available, ranging from simplistic drill and practice sessions to sophisticated simulations and research demonstrations (Blank, 1986; Danziger 1986; National Collegiate Software Clearing House, 1988).

In my experiences as a professor of sociology at a small private liberal arts college, I first used computers to demonstrate social statistics and variable relations in introductory sociology courses. The packaged demonstrations were well designed and the programs accessed a wide range of statistical data quickly and efficiently in an impressive display of computer power. As demonstrations, these programs did not actively involve students in any computer work. Increasingly, it became obvious that students would benefit from direct experience with the programs, and I developed a series of interactive exercises using various statistically oriented databases. Concurrently, sociologically oriented computer applications designed for instructional use have become more common and accessible within the past few years.

One difficulty, present from the beginning of the introduction of "academic computing", is determining the appropriate use and values of technologically based education. The effective and meaningful integration of computers into the standard liberal arts curriculum is neither easy nor noncontroversial (Behar, 1987; Cleveland, 1985). Students (and faculty) need considerable support and encouragement if they are to use computers comfortably, and frequently applications are either inappropriate nor directly related to the course content or syllabus (Behar and Hackett, 1988). After a few semesters of improvising with a variety of techniques

---

Joseph E. Behar, Department of Sociology, Dowling College, Oakdale, NY 11769

including *survey studies*, *word processing*, *telecommunications*, and interactive simulations, I decided to try to design an innovative course that would be taught solely through the use of computers. My interest was to simplify the problem of trying to integrate computers into the curriculum by eliminating traditional text and lecture requirements and create a pure experimental context for the evaluation of the academic worth and potential of computer studies and applications in sociology. This paper describes the initiation, design, progress, and relative values of a special seminar course, Sociology Through Computer Applications, taught in the Spring of 1989 at Dowling College.

History

With a special interest in the social implications of technology, I designed and implemented in the Summer of 1986 a course entitled "The Social Impact of Computers and Information Technology". As a fairly traditional course, the material covered included theoretical and research studies in the social changes brought about by the introduction of the computer in the workplace, the home, and in education. The widespread dissemination of computers in society provided a basis for the study of privacy, legal issues, and other social impacts (Perrolle, 1987). As this course deals with the interface of technology and society, the information age, and implicated social changes, it has been a relevant and relatively successful addition to the sociology curriculum.

During the first few semesters teaching the social impact course, I would ask how many students in the class has actually worked on computers. Initially, the response was usually less than 25 percent of the class. Each subsequent time I have taught the class, the percentage responding positively has increased dramatically, until it now approaches about 80 percent. It became my habit to include in this class a computer hands-on workshop to familiarize students with the workings of the computer. I claimed that it would be easier for them to understand some of the technical terms if they actually experienced working with a micro-computer.

By 1988, the significant presence of "academic computing" on campus was quite apparent, and I decided to conduct a formal survey study of computer use at the college. In general, the results indicated widespread but uneven, disparate uses of computers by students (Behar and Hackett, 1988). In effect, within a short period of time, I found myself working on three different levels or fronts in academic computing. In one context and based on my past experiences, I continued to introduce students in the social impact class to computers through the workshop demonstrations, which actually became more sophisticated and exposed students not only to word processing but also to databases and telecommunications. Under a second set of conditions, I expanded the use of various computer applications in my other classes, both as demonstrations and as hands-on experience. And thirdly, I was involved in detailed survey research on student use and experience with computers.

With this background providing generally positive indications for the actual and potential uses of computers, I decided to try out an experimental course in sociology that would depend mainly and almost exclusively on computers for instruction. The course did take several years to design, was modified during the semester several times, and, if nothing else, provided a concentrated experience in sociological computing.

The Course

There were several goals of the course, including an openness to serendipitous results. Basically, students would use the computer to prepare all written text assignments, complete a variety of computer based sociological exercises, and submit an original survey research project utilizing a statistical package (see Appendix A). Initial instruction in word processing was primary. This basic skill was complemented by instruction in text file management, bibliographic organization, and desktop publishing. The MacIntosh computer was selected for text and graphics preparation. By the end of the term, the students had considerable experience using not only MacIntosh computers, but MS-DOS and Apple II systems as well.

It was made clear that programming would not be taught. While there is debate on the uses of programming in liberal arts computer applications, I neither had the desire, interest, nor skill to teach what I maintain is an unnecessary capacity for the effective use of computers in liberal arts based education. Students, however, were specifically required to use CD-ROM systems for bibliographic and text retrieval, design one desktop publishing paper, use statistical packages for the analysis of existing database information, initiate and implement an original research design, experiment with telecommunications in accessing online information services, critique hypertext materials, and work with over a dozen sociological computer applications, mastering at least two for the purposes of sustained written critique (see Appendix B).

The class of fourteen students met once a week in the evening for two and a half hours. Most often students, when able, stayed longer, working on various assignments. Many of the students were non-traditional, older returning students who worked full time at generally professionally oriented white collar jobs. At first there were complaints that the work load was too much and what was expected was not always clear to them. Indeed, the work load was extensive, more than most of my other classes, and at times I was unsure what would be accomplished. At the end, however, all of the work assigned was completed, and various goals were reached which I discuss below.

In designing the Sociology Through Computer Applications course, I utilized five distinct approaches to computer based instruction:

1. Initially, students were introduced to MS Word, SuperPaint, and Cricket Graph as basic resources for word processing, graphic design, simple statistical analysis, and desktop publishing. I viewed these resources as essential for the preparation, organization, and production of student work that would eventually take the form of written hard copy text. With the relatively user-friendly MacIntosh inter-face, students were directly immersed in the process of gaining computer literacy and became reasonably skillful with the text and graphic programs within two to four weeks.

2. In an attempt to reinforce computer skills, students were next introduced to the CD-ROMs system in the reference section of the college library. As a majority of the students had no experience working with computers prior to the course, few had any experience accessing the CD-ROMs which were a relatively recent addition to the library. Students were instructed in five different databases including: the Readers' Guide to Periodical Literature, the Social Sciences Index, Eric, CIJE, and the Business Periodicals Index. Students were instructed in search techniques, Boolean logic, and set theory, and were required to submit an assignment based on a bibliographic search of the databases.

3. Specific software packaged applications in sociology, which I believed to be the core of the course, were next introduced. In general, these consisted of interactive hands-on computer assisted programs and varied in content and orientation. Some instructed on basic terms and concepts in sociology while others were structured as video-text to be directly read or scanned. The more interesting and innovative programs were designed as simulation games, challenged the students to make decisions and develop strategies, while demonstrating various social processes and structures. Finally, there were hypercard based programs which provided social and historical information utilizing the hypertext format of multiple levels of integrated readings.

4. At about mid-semester, students were introduced to statistical and quantitative analysis via the Showcase series of instructional programs in sociology. Several Showcases were demonstrated and students became relatively proficient in reading tables, deciphering basic descriptive statistics, and interpreting simple correlations, cross tabulations, and regressions. With students primarily required to watch and listen to the demonstrations, these exercises were not truly hands-on but did serve to demonstrate important strategies in statistical analysis. One exception which allowed for maximum students hands-on experience was the Introducing Criminology through the Computer Showcase which consisted of a series laboratory type survey research exercises. (Based on student experience with this program, I used this Showcase application in a subsequent criminology class with generally favorable results.)

5. As a final end-term assignment, students were give the option to either continue writing critiques of software applications, or work together in teams in designing and implementing a mini-survey research project. About half the class chose to work on the survey project, and

designed and administered a questionnaire, coded and entered the data, analyzed the results using the MyStat statistical package, and prepared written reports. This was a fairly demanding assignment and combined world processing, graphing, and quantitative skills in a project that was completed in less than three weeks.

A brief demonstration on the uses of telecommunications was given, and several information services and bulletin boards were accessed. As the college does not have the resources to provide telecommunications access for students, this was not a hands-on opportunity and really only suggested the uses and capacities of telecommunications. I would have preferred to have done more with telecommunications but was restricted due to limited resources.

Computers and Sociology

The central issue in the use of computerized based learning involves evaluating the substantial educational and intellectual experience provided by various information technology systems. It is necessary to examine carefully if and how computers support education, what is gained or lost, and the specific impacts of computers in emphasizing or distorting particular interests or value. For my purposes, the problem was a simple although extremely difficult to evaluate. I wanted to know if extensive, elaborate, and varied use of computers would markedly change the quality and conditions of instruction and learning in sociology. In effect, could computers make a critical difference by providing the basis for an enriched academic program? Or are they unlikely to live up to inflated expectations and perhaps even prove to be damaging to the pursuit of traditional academic goals. Certainly, faculty are struggling with this question on campuses all over the United States with some firmly opposed and resisting the intrusion of what they view as an inappropriate and unnecessary technology. Others seem to have jumped on a bandwagon that may not be stopped (Kling and Iacono, 1988; Roszak, 1986).

Clearly, there were several distinct outcomes of the Sociology Through Computer Applications Course. Many students with limited or no experience did come away from the course with considerable experience and a practiced mastery of the computer in general. Some learned word processing, the use of statistical packages, and bibliographic search strategies quite well. And all agreed that their experiences with computers were interesting and challenging, providing a basis for realistic assessment of future potential uses. Simply put, the students learned how to use computers effectively in a variety of contexts, and in general had become "computer literate", increasing their working knowledge of computers.

The consequences in terms of gains in sociological instruction are less clear. The various specific applications in sociology were of uneven quality and were not uniformly judged by the students. If I were to evaluate the class in terms of the development of an authentic sociological perspective, an inquiring mind, and a disciplined approached to the study of society. I am not sure that I could always say that the use of the computer was of consistent special benefit. Indeed, it can be argued that the straight lecture and use of traditional texts may accomplish as much or more in sociology, depending on the level of students, the special interests of the course, and the personal resources of the instructor. Specifically, I found that once the students were committed to a particular program, I could not "manually override" the instructional applications with more detailed discussion. Becoming "task-oriented", students worked on various programs in different ways and apparently with different degrees of interest and concentration. Indeed, while there was a lot of computer work, overall, there was not enough class discussion of sociological ideas and concepts or problems of research and theory.

Additionally, many of the specific learning programs in sociology were quite weak or simplistic. Students concentrated on mastering the techniques of the program and seldom were provoked or given the opportunity for further investigation or thinking. Primarily, students worked independently on the various programs and at any one time several programs were being used by different students during class sessions. Perhaps if everyone used the same program, there would have been greater opportunity for a common class discussion. And yet, one of the keys to the utility of the hands-on experience is that it allows students to work independently, at their own pace, and without formal direct guidance by the instructor. Interestingly, the programs did not isolate students, as students working on similar programs and projects did discuss the materials and shared information. The problem was that this sharing rarely involved pure sociological discussion of ideas and concepts.

Conclusion

In may ways, I view the class a success. It did accomplish most of the goals, provided instruction in sociology, and developed an innovative context for student experiences with computers. At the conclusion of the class, I requested that students critique the class, concentrating on the values of computers for learning sociology. In general, the students believed that the class was worthwhile as they became familiar and skillful with computers and various applications. Many enjoyed the cooperative working environment and the practical activities of the hands-on exercises. Some acutely commented that while a great deal of time was spent mastering various applications, sociological interests and values were not always especially prominent.

From my point of view, one of the principal consequences in the use of computers in course instruction is that it literally forces students to participate, ask questions, learn at least technical skills, and perform in ways that are practical and actively effective. The phenomenology of the classroom is definitely changed by the introduction of computers as the instructional interface no longer consists only on student-teacher interactions but now includes machine based performances and the technical accessories of information technology. In important ways, the computer creates the opportunity for students to do sociology and become active participants in their sociological education. Yet one wonders about the practice of technique in relation to the capacities of the intellect. While students practice sociology in the computerized academic environment, do they actually understand more? Are they made curious by their activity; will they read, study, muse, imagine; and, in essential terms, truly develop sociological knowledge and insight?

At this point, I am unable to answer these questions definitively; perhaps, it is too early to know how to evaluate these kinds of questions and concerns. While I believe students can benefit from computers, that most if not all of the experiences of the course were worthwhile, and that the skills learned are advantageous, I do not think that computers and information technology will ever constitute a sufficient approach. Computers may make our students active performers in effectively and efficiently accomplishing specific educational goals. But, if there is to be a true education of minds, students must continue to read, gain information, think critically and creatively, and reflect with refined intellects on their experiences and knowledge of the world. In the arena of the academy, this continues to mean the centrality of human dialogue.

REFERENCES

Behar, Joseph E. (1987). Faculty interests and requirements relating to the uses of computer information services at Dowling college. Photocopied manuscript.

Behar, Joseph E. (1989). Aspects of Social Change in Europe and Latin America by Rodney Stark. *Social Science Computer Review*, 7, 236-238.

Behar, Joseph, and Hackett, Michael S. (1988). Challenges to the new information age curriculum: Computers and the liberal arts. Manuscript.

Blank, Grant. (1986). New technology and the nature of sociological work. *The American Sociologist*, 19, 3-15.

Cleveland, Harlan. (1985). Educating for the information society. *Change* (July/August), 13-21.

Conrad, Peter, and Shulamit, Reinharz, (1984). Computers and qualitative data: Editors' introductory essay. *Qualitative Sociology*, 7. 3-15.

Danziger, James A. (1986). Waiting for the revolution: The use of microcomputers by social scientists. *The American Sociologist*, 19, 32-53.

Kling, Rob and Iacono, Suzanne. (1988). The mobilization of support for computerization: computerization movements. *Social Problems*, 35, 226-243.

National Collegiate Software Clearing House. (1988). *Software for the Humanities and Social Sciences*. Durham, NC: Duke University Press.

Perrolle, Judith A. (1987). *Computers and Social Change*. Belmont, CA.: Wasdworth Publishing Company.

Roszak, Theodore. (1986). *The Cult of Information: The Folklore of Computers and the True Art of Thinking*. New York: Oxford University Press.

Appendix A: Syllabus (abbreviated)

General Information:

Student evaluations will be based on take-home and in-class assignments, special projects, and attendance. Information concerning the specific scope and nature of assigned papers and projects will be distributed at a later date.

RESOURCES

I. Text materials on file (Soc. 185) in Library Reserve.

1. Random House Dictionary of Computer Literacy.
2. Vasu and Garson: Telecommunications and Higher Education,

II. Xeroxed notes and articles distributed in class.

1. Sociology Programs (list).
2. Poster: "Meet Seedy Rom."
3. Behar and Hackett: Computer Literacy and the Liberal Arts.
4. H. Cleveland: Educating for the Information Society.
5. M. Levin: Showcase: Family and Socialization; G. Hill: Showcase: Crime and Deviance; J. Behar: Showcase: Europe/Latin America and Social CHange (Reviews of software).

III. The MacIntosh Network system with various applications.

1. MS Word
2. SuperPaint
3. SocStat
4. Cricket Graph
5. HyperCard

IV. Software applications on disks (Mac, IBM, Apple II) on file (Soc. 185) in Library Reserve. (see "Sociology Programs").

V. Apple II series computers in the Academic Computing Center.

VI. IBM format computers in the Academic Computing Center.

VII. The CD-ROM system dedicated to four specialized databases.

1. Readers' Guide to Periodical Literature
2. Social Sciences Index
3. Eric and CIJE
4. Business Periodicals Index

VIII. Telecommunications

1. Smartcom communications software.
2. Dialog Information Service databases: On Tap & College Program.
3. Bulletin board systems.
4. Dial-up services, etc.

Appendix B: Course assignments

Workshop Assignments

1. MS Word: "What is Sociology" essay. Draft and revision saved to disk and printed hard copy. Use of "data disk."

2. SuperPaint: Design, editing, saving, and printing of Poster with border.

3. CD-ROM: Search strategies.
   Subject specific databases with indexed journals list.
   Bibliographic construction.
   Assignment: Locate and copy to disk Two bibliographic journals citations (with abstracts, key words, desecrators, and subject headings) in reference to selected sociological sub-topic.

4. Project: Submit short paper consisting of:

   a) Poster (SuperPaint) relevant to sub-topic.
   b) Revised "What is Sociology" essay.
   c) 1-2 page essay on selected sociological sub-topic.
   d) Full bibliographic citations for sub-topic essay.
   (All documents saved to disk; printed in 'best' mode).

First Critique Assignment:

You are to write separate critique reviews of two sociologically oriented computer software applications.

Select the programs Only from the Resource List previously distributed.

All software available in multiple copies in Library Reserve: Soc. 185 Software File.

Each critique should be approximately 3-5 typewritten pages and must be submitted as printed hard copy of MS Word text files saved to your disk.

Guidelines for software critique reviews:

Include review and evaluation of the following:

1) Ease of use and technical efficiency and design.
2) Clarity of instructional or research goals and objectives.
3) Value as sociological learning experience.
4) Relation to other sociological studies and interests.
5) Relevance and significance of subjects examined.
6) Clarity of major concepts, methods, and theories.

In general, discuss the merits of the program as a sociological learning resource. Comment on the clarity, meaningfulness, and value of the ideas and materials presented. Critique the program in relation to the goals of sociological education and study. (See 3 reviews of Showcase applications in sociology xeroxed and distributed to class).

End Term Assignments:

1. Complete additional Two software critiques as indicated above. (Each critique may be approximately two typewritten pages).

2. Submit formal evaluation of course discussing uses of computers for sociological study and research. Report on effectiveness of course design, topics covered, and resources used.

3. Complete and submit one of the project options relating to sociological survey research.

In general, computer applications involving statistical data files allow the social researcher to compile, study, analyze, and report on quantitative information. With existing data files (statistics that are previously compiled and provided for research), students have the opportunity to investigate empirical facts, locate basic statistical information, and explore correlations and other measures of statistical significance.

Additionally, most "statistical packages" allow a researcher to input new information that can then be subjected to statistical tests. For instance, students may design a survey questionnaire on a topic of their own interest, administer the survey to a sample of respondents, compile the answers into a computerized data file, and start doing important and significant analyses immediately.

Assignment: Choose one option and complete survey study (Due last class).

Option 1: Design a survey study. Administer a questionnaire, code and input answers. Report statistics and analyze relationships among variables. Print out tables. Write a general summary report on sociological conclusions. May be a group project (more than one student). Combines skills: word processing with MyStat statistical package (graphics and graphs also possible in reporting information). See me for more information and assistance.

Option 2: Using any one of the various Showcases surveys, develop an analysis of a selected sociological topic using existing statistical databases. Examine and analyze appropriate variables. Explore and discover significant relationships. Write a general summary of your "study."

Note: All assignments are prepared using word prossing, printed as hard copy, and saved as text files. Data file disks will be collected.

FRESHMAN SEMINAR IN A NONTRADITIONAL CONTEXT: A COURSE FOR THE ADULT STUDENT?

Kathryn K. Frost
Christopher J. Frost
Michael J. Pierson

Introduction

One educational trend of the last decade has been the increased attention given to developing a "Freshman Studies" course. At schools where it is constructed and taught as an enrichment course, rather than as an orientation session, students are asked to think critically about their education, to consider the relevance of education to society and social change, and to view learning as a lifelong process--not simply as a one time undertaking that ends with the awarding of a diploma (Gordon, 1989). The original blueprint for such a course, however, was designed with one student profile in mind: The traditional 17-to-19-year-old teenager pursuing a linear path towards a diploma over 4-to-5 consecutive years.

A primary goal of the course is to move students from a narrow focus on college as an end and as "given" to a broader view of college as a means and as "chosen." According to a report by the National Endowment for the Humanities, 37 percent of four-year colleges and universities graduate students who have never taken a history course, 45 percent graduate students without a literature course, 62 percent without a philosophy course, 77 percent without a foreign language, and almost 80 percent without a course in the history of Western civilization (Note 1). These statistics alone suggest that a number of students may be getting a diploma, but not necessarily a broadened perspective of life.

Even where students take a token course in this department or that, does a broadened perspective necessarily follow? Research emerging from cognitive psychology suggests otherwise. In one study, for instance, researchers asked subjects to view a videotaped basketball game; their task was to press a button whenever the ball was passed from one player to the next. What the subjects did not know was that the researchers had a woman dressed in white and carrying a white umbrella walk across a section of the court during play. Although she was in clear view for a full 4-5 seconds, none of the subjects reported seeing her.

Kathryn K. Frost, Counselor, St. Mary's University, San Antonio, Texas 78228
Christopher J. Frost, Assistant Professor, Psychology, Southwest Texas State University, San Marcos, Texas, 78666
Michael J. Pierson, Professor, Occupational Education, Southwest Texas State University, San Marcos, Texas, 78666

The point of the research was to illustrate the cognitive process called selective attention, a process that explains the capacity of humans not to see what is clearly evident, often as a result of the purposeful narrowing of perception. The question cognitive research raises for educators is the extent to which college students really perceive the breadth of what is "available" to them, once they have already narrowed their educational focus to diploma/career considerations. It may be that seeing core curriculum courses as hula hoops through which to jump versus seeing them as courses that enrich the educational experience hinges on the perceptual stance of the student.

If we are correct in this assumption, then the Freshman Seminar might best be conceptualized in cognitive or perceptual terms: The goal of the course is to challenge and to broaden student perceptions regarding the highest purposes and ends of education and, in doing so, prepare them to make the most of their educational opportunity. Perhaps one of the most important preparatory steps is moving them from narrow focus to a more open, broadened perspective wherein the "screening out" process is held in temporary abeyance.

Freshman Seminar and the Adult Student

A question that follows from this understanding of Freshman Seminar is: Do all entering students generally share the same, limited perspective on education, especially where large gaps in life experiences exist? For purposes of this paper, we will examine this question by exploring distinctions between the adult, nontraditional student and the traditional profile normally considered in designing the Freshman Seminar.

Although often required to take the same Freshman Seminar as their younger counterparts, it is not clear that adult students enter the university with the same perspective, nor are in need of the same kind of course. In many instances the very faculty members calling for a course to broaden perspectives have, by not seeing important experiential and developmental differences of adult students, fallen prey to the narrow focus syndrome they diagnose in their students. At the very least we should ask some questions that might lead to a perception of important differences.

Do the years of life experiences that an adult student brings back to school result in important differences in how he or she perceives education? If so, Freshman Seminar should be redesigned to draw upon that experience, to provide a forum within which life experience and a formal educational experience can be seen as integrative.

The problem, however, is that we generally ask both adults and younger students to reflect on the life experiences of the teacher or on experiences of the teacher's choosing. Because these experiences are not rooted in the conceptual structures of the students, they have difficulty reflecting on these experiences. Reflective learning (Figure 1) is difficult to implement without a known or valid experience base, which is why the reflective process is often not very effective for adult and younger students alike. The process of reflecting on experience is a powerful tool; educators should remember that, to be most effective, the process should be anchored by the valid experiential base of students.

Figure 1
Reflective Learning

Student Life Experiences + Teacher Guided Reflective Learning - Conceptual Integration

Where adult students do bring a wealth of experience with them, does this suggest the need for a different pedagogy, say an instructor who functions more as facilitator than as provider of content? And should nontraditional students form homogeneous groups (all adults), or would they benefit more from the diversity of heterogeneous groups (by age)? We will explore these questions with one basic purpose in mind: To provide a blueprint for building a Freshman Seminar that can provide nontraditional students the best preparatory forum for the broadest educational experience.

Freshman Seminar as Broadening of Perspective

To provide the most effective educational environment for adult students, we need first assess primary characteristics and significant needs of nontraditional students. Although often considered middle-aged as a group, students are generally designated nontraditional if they are twenty-five years of age or older, or if they are married. According to Pierson and Dorsey (1988), reasons for return to school vary from self-development, including a freely chosen career change, to a response to circumstances over which the person has no control, such as economic changes that force a change in career.

At Southwest Texas State University (SWTSU) most adult students returning to school have spent the preceding years working in a business, government or corporate setting, or working in the home. This time carried out in non-academic environments brings with it many valuable life experiences, ones that challenge perceptions in ways that traditional freshmen may not be able to comprehend. Our point here is that some or all of these life experiences may change significantly the way adult students view and respond to their coursework. Developmental stages through which college students proceed, like those set forth by Perry (1970), are not necessarily adequate until age and experiential considerations are factored in.

Empirical research carried out at SWTSU, for example, confirms significant differences in preferred teaching behaviors (Pierson et al., 1989a) and in preferred learning styles (Pierson et al., 1989b) as a function of age. Differences in how adult students approach the Freshman Seminar have been observed as well (Note 2). In an experimental section of the course, one composed of all nontraditional students, the level of reflection on course material has been much more abstract. The progress of this section leads us to question whether the "perspective broadening through reflection" approach for traditional students is appropriate for typical 17-to-19 year-old freshmen. To the extent they lack sufficient concrete experience essential for reflection, they may not yet understand broad philosophical questions raised in the seminar, much less be motivated to seek answers through critical thinking or problem solving. In the nontraditional section, on the other hand, the relevance of broad reflection on issues of self, life, and learning is seldom seriously questioned. Instead, the primary issues tend to revolve around an integration motif: How one is best able to connect formal learning in a university setting with one's own reservoir of life experience; that is, how one best bridges the gap between knowledge and life.

Homogeneous versus Heterogeneous Sections

The chance to offer adult students their own section of Freshman Seminar, even on an experimental basis, did not come easily at SWTSU. Opponents of the homogeneous grouping idea marshalled meritorious arguments against offering such a section, most of which revolved around the diversity motif: By bringing together students at different developmental stages, an instructor can draw upon a wider array of student experiences within the classroom. As students convey these experiences to their classmates, they do so from their own frames of reference. As classmates hear experiences lived and communicated from perspectives different from their own, they are challenged to examine and reflect on their own points of view more critically. More to the point, the opponents of a nontraditional Freshman Seminar assert that younger, traditional freshman entering college can benefit from the wisdom, experi-ence, and motivation that many an adult student brings to the course.

Such arguments are not without merit. We find, however, that they are lacking in at least two major respects. First of all, remember the cognitive research cited in the introduction, the point of which is that persons can miss what is perceptually available to them--especially when they are narrowly focused on something else. If this generalization from cognitive research holds true, then educators should not assume that just because a variety of viewpoints are co-represented, students will automatically benefit from them.

A number of comments from younger students in heterogeneous sections of Freshman Seminar illustrate this caution vividly: "He [or she] sounds just like my father [or mother]." "They [the adult students] sound like they already know it all, so why did they return to school?" And so on.

The point of these objections is that the experience conveyed by older students is just that: The experience of older students. For reflection to be most effective, it needs to be connected to the younger students' own experience.

Comments from adult students often reflected a similar dissatisfaction with mixed sections: "Who cares about the great condom issue?" "What do you mean motivate me to think clearly? If I can build three businesses from scratch, who are you to say that I am in need of 'critical thinking skills'?" When the nontraditional Freshman Seminar section was polled regarding the advantages of a homogeneous group, all students responded that such an approach was preferred in terms of reaching course objectives. Ironically, the statements of frustration by nontraditional students is analogous to those made by younger students: They can be seen as a plea for a course where the reflective process is connected to life experience, not carried out as if in a vacuum.

We believe that both sets of comments also lead to the second major flaw in arguments against special sections of Freshman Seminar: Calls for diversity need to be considered in their full educational context, one that includes the particular objectives of the course as well as the developmental needs and experiential bases of the students. There may be certain courses and particular groups of students where course objectives and student developmental differences dictate some homogeneity is pedagogically useful (Gordon and Grites, 1984). Even when students are matched by age, a great deal of diversity in terms of experiential content still exists, and instructors are free to introduce material that reflects intellectual diversity. Further, by offering one (or a few) special sections, the university is allowing for both educational situations to exist: The adult student can choose between the age diversity offered by an open section and the developmental commonality offered by a nontraditional section. Ironically, it is faculty members who, in seeing nontraditional sections and diversity as an either/or alternative, reflect Perry's dualistic thinking stage, the stage that he sees as characteristic of the beginning college student!

Facilitator versus Information Provider

Assuming a college provides special sections, especially ones for nontraditional students, how do these sections impact the role of the instructor? Should an instructor approach a classroom full of nontraditional students in the same manner as a heterogeneous section? Again, this is a question that demands answering contextually, in reference both to the nature of the Freshman Seminar and to the nature of the students who comprise a particular section.

A college professor is generally considered to be an expert in some specific knowledge domain; that is not necessarily the case with Freshmen Seminar. Freshman Seminar emphasizes self-reflection and independent thinking, and promotes this emphasis by using a text designed to provoke critical reflection. It is thus best seen as a course that does not lend itself to leadership by an expert there to dispense content (Note 3). Certainly many professors have pursued their life questions critically and have reflected upon their life more thoroughly than many an 18-year-old. It does not follow, however, that such reflection makes professors experts on how students might best approach their own lives.

First of all, this limitation of the professorial role exists because the process of reflection cannot be accomplished vicariously. Reflection is participatory, so it does little good for students to serve simply as spectators. At the risk of tautology, we assert that in order to develop critical thinking skills, students require participation in critical thinking and guidance in how to reflect upon their own experiences.

Secondly, the limitation is especially acute with adult students, many of whom may be older and have more life experiences than the instructor teaching the course! Accounts of instructors benefitting from the contributions of nontraditional students abound, and we have thus begun planning an empirical study to look at this facet of the educational process.

Finally, our prior empirical research illustrates important differences between traditional and nontraditional students, ones that suggest a need to modify instructional style (Dorsey and Pierson, 1984; Pierson, et al., 1989a; Pierson, et al., 1989b). In generalizing from this empirical research and from our experimental section of nontraditional students, it is clear that the most successful strategy in this context is a participative one: The role of the leader is more that of facilitator of a process than a lecturer of content.

Conclusions

In general we applaud attempts to promote diversity in Freshmen studies courses, especially where that diversity serves to challenge students to broaden their perspectives--on self, society, and the highest purposes of education. We nonetheless conclude that promoting diversity should not be used as an excuse for failing to consider the particular objectives of the course and the developmental needs of students registered for the course. In short, it should not function as an excuse for failing to think critically and contextually. In drawing upon both empirical research and case study, we find that a forty-something student, who is married, has children and her own business, may require a different course entirely from an 18-year-old young woman fresh out of high school.

An experimental freshman seminar at SWTSU, composed entirely of nontraditional students, already has begun to confirm certain advantages of special sections. Although the readings used in the course are the same as those used with traditional sections, they have been generally perceived and discussed quite differently by the adult students. The instructor of this course, a co-author of this paper, concludes that students in special sections can be even better served if a different collection of readings are used. For this reason we advocate use of a "modular text" for the course: A large number of readings are collected by the entire faculty, from which a percentage are chosen by individual faculty members based upon the needs of their section. SWTSU will implement the "modular text" approach as of Fall 1990.

And this is as it should be: Perhaps all freshman studies programs would benefit from a willingness by faculty to experiment with the course, both as to content and instructional strategies. In doing so, faculty members might broaden and refine their own perspectives on self, society and education. When all is said and done, the effect on faculty may be one of the greatest assets of freshman studies. By challenging professional tendencies toward smug complacency, the program serves as a catalyst for professorial growth and development as well. As faculty members, adult students and traditional students all participate in readings and discussions designed to broaden perspectives, perhaps we can all become better perceivers. Maybe we will even learn to spot the woman in white.

References

Cohen, R.D., and Jody, R. (1978). Freshman seminar: A new orientation. Boulder, CO: Westview Press.

Doman, E.F., and Christensen, M.G. (1976). Effects of a group life seminar on perceptions of the university environment. Journal of College Student Personnel, 17, 66-71.

Dorsey, O.L. and Pierson, M.J. (1984). A descriptive study of adult learning styles in a nontraditional educational program. Lifelong Learning: An Omnibus of Practice and Research, 7 (8), 8-11.

Gordon, J. (1989). Freshman seminar: Unlocking the American mind. A paper presented at the National Conference on the Freshman Year Experience, University of South Carolina.

Gordon, V.N., and Grites, T.J. (1984). The freshman seminar course: Helping students succeed. Journal of College Student Personnel, 25, 315-320.

Perry, W.G., Jr. (1970). Forms of intellectual and ethical development in the college years. New York: Holt.

Pierson, M.J. and Dorsey, O.L. (1988). Assessing quality in a nontraditional degree-fifteen years later. Proceeding of the National Conference on Non-traditional/Interdisciplinary Programs, 20-26.

Pierson, M.J., Springer, S.B., Frost, C.J., Dorsey, O.L., and Dietz, A. (1989a). The interactive effects of teaching and learning styles in an educational environment. *National Issues in Higher Education*, *22*.

Pierson, M.J., Springer, S.B., Frost, C.J., and Dorsey, O.L. (1989b). Preferred teaching styles as identified by students: A descriptive study. *Proceedings of the National Conference on Nontraditional/Interdisciplinary Programs*, 204-213.

Reference Notes

[1] These statistics were included in a brief report, "Whither the Humanities," in the December 1989 issue of *Psychology Today*. The figures were gleaned from a report by the National Endowment for the Humanities.

[2] Observations from a special section of Freshman Seminar (all nontraditional students) have been systematically recorded by the instructor, Christopher J. Frost. A video tape of one or more sessions of this section in progress is also being produced.

[3] Some of this course description material comes from a faculty "orientation package" written by Jeff Gordon. Copies of this package can be obtained by writing Dr. Jeff Gordon, General Studies, Southwest Texas State University, San Marcos, Texas 78666.

COMPARATIVE ARTS TEACHING AT THE UNDERGRADUATE LEVEL: STRATEGIES AND FALLACIES

William E. Grim
Michael B. Harper

Introduction

In an era of ethnic and cultural diversity in which educators can no longer assume the general undergraduate student population to be familiar with a common body of literature, music, and visual art, the difficulties associated with interdisciplinary arts teaching are profound. These difficulties, however, can be mitigated by abandoning the preoccupation with the Zeitgeist that is so much in evidence in the vast majority of general humanities and interdisciplinary art textbooks. Rather than emphasizing broadly-based and amorphous concepts (such as romanticism, the Renaissance, etc.) as the keys to explaining all works of art, the thrust of undergraduate comparative arts education should be with a small and manageable group of artworks. These artworks should be examined in detail so that the interdisciplinary nexus among types and genres of art become manifest within the works of art themselves instead of being imposed from outside by an "idea."

Effective teaching strategies for comparative arts courses designed for the general undergraduate student population will be discussed within the context of representative course offerings of the Ohio University School of Comparative Arts, specifically Cultural Traditions and the Arts and the Faust Legend in the Twentieth Century.

Cultural Traditions

Cultural Traditions is a three quarter survey of major monuments of the fine arts in Western Civilization from the Ancient Greeks to Post-Modernism. As with all of the tier three courses, it was intended to be taught as a senior seminar: a small group of students from diverse backgrounds and usually with little or no specialized knowledge of the subject gathered together for an in depth discussion of an interdisciplinary nature. The basic concept in the Cultural Traditions courses was to bring the students together and building upon their varied experiences and educational backgrounds and have them discuss the "key ideas" embodied in selected masterpieces of art.

Michael B. Harper, Associate Professor, School of Comparative Arts, Ohio University, Athens, Ohio.
William E. Grim, Assistant Professor, School of Comparative Arts, Ohio University, Athens, Ohio.

There were several problems exposed in the practical translation of idea into actual courses. The first was the result of too many students with too few choices. This led, in the case of a popular subject like Cultural Traditions, to an overwhelming demand, followed by a gradual inflation of class size from the original limit of twenty to twenty-five, to the current "limits" of thirty to forty students. These are no longer numbers that are conducive to a true dialogue in the class.

In addition, we can not assume a common cultural heritage in the diverse population that makes up the student body of a large state institution. The Greco-Roman-Judeo-Christian culture produced by the traditional "classical" curriculum is no longer a given in higher education. It has been replaced by a "career oriented" curriculum with a thin coating of liberal arts courses, often requiring an ethnic, geographic, and gender diversity that makes any understanding in depth of any particular cultural tradition virtually impossible.

Since most of the students were not only innocent of any knowledge of the particular subjects, but of the so-called western cultural bias that many administrators assume they have to begin with, it was often all but impossible to get more than a few to actually engage in a dialogue. Those who had little or no background were intimidated by those who showed any knowledge at all on the subject. Therefore a few of the more knowledgeable and vocal students tended to dominate the discussions. Under such circumstances, is a true participatory discussion possible? I think so. But it necessitates a great deal more background information provided in readings and lectures than was assumed in the initial planning of the course.

There were theoretical issues as well as practical concerns: What is the difference between an interdisciplinary and a multidisciplinary course? Is the question even relevant under the circumstances? Since the goal of the program was to use all of the faculty, not just those in existing interdisciplinary programs like Comparative Arts, it is not realistic for those unfamiliar with such methodological niceties to concern themselves with the more subtle distinctions. Besides, many of the courses were to be taught by two or more professors from different disciplines, which generally led to a multidisciplinary rather than a strictly interdisciplinary approach to the subjects.

Let us now turn from the general problems to the specific issues involved in the Cultural Traditions courses. I will begin with the most general of concerns and then move to specific examples.

The basic format of the course and the text, Fleming's Arts and Ideas, had already been chosen before I taught the course. The text book, not having been written specifically for the kind of interdisciplinary senior seminar that we were using it for, was limiting on the instructor. The examples of artworks were not always those I would have chosen for discussion. And there were limits to the art forms included in the text and the depth of coverage given to the arts. Although Fleming began his academic career as a musicologist, his coverage of the visual arts is more thorough than that of music, and much more thorough than his coverage of the literary arts. But anyone who has been teaching as long as I have is used to text inadequacies, and has learned to work around, if not with someone else's text or choice of text.

The format of the course was more problematical. It was what we in Fine Arts call the "arts and ideas" approach, which in general reduces the complexities of the intellectual and spiritual context to a simplistic abstraction, the Zeitgeist, or to a few "key ideas" from the major historic periods. At its best this approach produced Max Davorák's Geistesgeschichte, at its worse it produces undergraduate survey courses of the great ideas and their expression in the key monuments of art. This approach does not do justice to either the artworks nor to the intellectual and spiritual environment in which they were created. To say that a period like the Renaissance was unified by a controlling concept, such as "humanism," is at best simplistic, reducing the entire western world in the fifteenth and the sixteenth centuries to a single mind set. Clearly the Renaissance period outside of Italy was distinctly different from that in Italy. And even if we limit ourselves to the Italian peninsula, the Renaissance in Florence was not the same as that in Rome, nor was that of the early fifteenth century the same as the later sixteenth century. How do we avoid this over-simplification? It seems to me that we can avoid many of the pitfalls of the "arts and ideas" approach by adopting what I shall call the "work centered" approach. We choose a few key works from the many possible examples within the historical periods that we must cover and deal with them in depth, rather than begin with a priori ideas and marshall in the artworks as mere illustrations of the idea.

From a purely didactic point of view, to begin with the art work itself has several advantages. The first advantage is that we may begin our investigations with a close intrinsic analysis of the work: medium, elements and principles of organization, and style. For the student who has little knowledge of the art form, this is a logical way to introduce some of the basic terminology necessary to talk with any degree of accuracy and specificity about the work. Stylistic analysis also allows us to see the work as it relates to other works, not only contemporary, but earlier and later works which offer both formal comparisons and contrasts. It is also a more logical progression to move from an intrinsic analysis to extrinsic concerns, from form to content. It not only allows us to discuss the artwork and the ideas expressed through the object, but how those ideas are conveyed through the form. Content is not just subject, but the particular form the subject is given. This relates idea not only with style or morphology, but demonstrates the capacity of a particular medium to convey some forms of content more effectively than others. This may be why certain art forms seem to dominate or, at least, to lead the way at a particular time and place.

Let us turn now to a specific case drawn from Cultural Traditions: Nineteenth and Twentieth Centuries. I begin this course with selected readings on eighteenth and nineteenth century neo-classicism and a discussion of the terms: "classical, classic, classicizing, and neo-classical." This offers an opportunity to discuss the differing meanings and the difficulties in using these terms with precision. The different uses of the term "classical" in music, and the very different uses of "neo-classical"in music and the visual arts offer ample material for discussion.

I move rather quickly from this general discussion of terms, to a specific work of art. From past experience, I know that the visual arts in general, and painting in particular, are more approachable than music for the uninitiated. David's The Oath of the Horatii (1784-85) is the work that I shall begin with. Only after I have led the students through a rather detailed formal analysis, do we begin to consider the style of the painting.

We may at this point review some of the classical and classicizing precedents of David's work. From the antique we might cite the Column of Trajan and from the Renaissance, works by Raphael. The art of Poussin brings us not only closer in time to David, but is of considerable importance both formally as well as iconologically. The stoic morality we find in this work is not unlike that of the seventeenth century master.

The discussion of style allows us to review the art that immediately preceded The Oath. We look at a pre-Roman painting by the same artist. And this in turn leads us to Boucher and the Rococo style. Only after an intrinsic comparison, do we begin to discuss the changes in content from the earlier period's erotic hedonism to that of David's stoic classicism. It is important to point out that David's well known "revolutionary" painting was bought by King Louis XVI, and that the republican virtues of the work reflected as much Louis's desire to reform French society, as it prefigured the coming Revolution.

We may wish to discuss briefly the literary sources of the painting, especially Livy's History. This might lead to a general discussion of the importance of history and literature in general as sources of subject matter in nineteenth-century art. This discussion can lead us into our next topic, classical opera.

Because of the obvious stylistic and iconological connections, I have chosen Gluck's opera Iphigénie en Tauride (1778-79) as the next artwork for close study. The choice of an opera allows me to deal with two art forms in one: drama and music. I shall first deal with the libretto by Guillard and Roullet based on the drama of the same name by de la Touche. Here we may compare the libretto not only with the contemporary play, but with Euripides' tragedy which is the source of both play and opera. The students will have not only had a chance to hear a recording of the opera, but they will also have had a chance to study the libretto in both French and English, and read the Gluck prefaces in Strunk before the class meeting. This will permit them to discuss intelligently not only the theme, but the relation of text and music which Gluck believed central to his classical theory.

A discussion of diction and the classical rhetorical tradition leads us naturally into an analysis of the music which was composed to bring out the elevated language of the drama. After an intrinsic analysis of the musical form of this drama, we are ready to compare the classical style of Gluck with the Italian style of Piccini and Pergolesi. Once more the stylistics will emerge naturally in our analysis and comparisons.

The last art form we shall deal with in the neo-classical unit is architecture. I have chosen the State Capitol, Richmond, Virginia (1785-89) designed by Thomas Jefferson with the advise of Clérisseau. The choice is not merely a matter of pleasing our conference hosts. Jefferson was in France and very much aware of what was going on around in the arts. Therefore this work offers an ideal way of bringing the style home, as it were, to America.

After an analysis of the style, we can move on to the sources of the design. Not just the usual nod toward the Maison Carrée at Nimes, but to the body of literature dealing with the proportions and the iconology of the orders. And this leads us to the relationship between classical style and the political ideology of the young republic.

We might close this unit discussion as well as my presentation with a brief look at post-modern classicism. We will want to take special note of the disjunction between classical motifs and the new--often radically new content that they are given by the modern practitioners of this most venerable style.

The Faust Legend in the 20th Century

No theme in western art has proven to be as resilient and thought-provoking as the Faust legend. The past 400 years have produced a plethora of literary, dramatic, visual, terpsichorean, and musical and operatic Fausts from all of the various European languages and cultures. Additionally, analogues to the Faust legend are seen in virtually every non-western culture and the advent of the "global village" have engendered an interest in the Faust legend by people from non-Western societies, as witness the extremely interesting analysis of Goethe's Faust by Daisaku Ikeda, the president of Soka Gakkai, the world's largest Buddhist lay organization.

Uniquely native Faust works provide added relevance for American college students. Such works include Stephen Vincent Benet's The Devil and Daniel Webster, Jack Kerouac's Doctor Sax: Faust Part III, Arna Bontemps' Lonesome Boy, Silver Trumpet, and the movie Crossroads. The universality of the Faust legend, therefore, is its greatest asset; its appeal spans all nationalities, races, creeds, and languages because it is concerned not with a specific event in a specific locale, but with the nature of the human condition.

The course that I teach in the Tier III program at Ohio University, The Faust Legend in the 20th Century, attempts to take advantage of these universal aspects of the legend and to demonstrate their continuing relevancy at the close of the 20th century.

In this course my students examine a sampling of Faust works from a variety of artistic media: Ferruccio Busoni's opera Doktor Faust; Gustav Mahler's Symphony No. 8; Thomas Mann's novel Doctor Faustus; Klaus Mann's novel Mephisto; Vaclav Havel's play Temptation; and the movies Mephisto and Crossroads.

Although the inclusion of Thomas Mann's Doctor Faustus may seem daunting for classes composed of general students (many of whom have had no background in the humanities and literature), I have found that the vast majority of my students have enjoyed the novel a great deal because of their fascination with the subject. It really makes no difference if not all students can catch every subtle nuance of Mann's irony or if they are unable at a first reading to comprehend the discussions of dodecaphonic musical composition or the intricacies of Kierkegaardian theology contained therein. The truth of the matter is that the greatest experts in comparative literature have yet to explicate fully the many levels of Mann's novel. We should not expect our students to be able to do likewise; what is important is that Doctor Faustus is challenging for the best of students while its narrative is accessible to those less academically endowed.

Even to a greater extent than his father's more famous work, Klaus Mann's novel Mephisto makes more accessible the analogy between the Faust legend and Nazi Germany. This analogy is further strengthened by the fact that the protagonist of the novel is a famous actor whose greatest role is that of Mephistopheles from Goethe's Faust. In addition, the Academy Award-winning cinematic version of Mephisto is especially useful in explicating the novel's many dimensions and its historical and cultural contexts.

By a fortuitous circumstance of history, one of the major players in the recent extraordinary events occurring in Eastern Europe, President Vaclav Havel of Czechoslovakia, is also a playwright whose latest creation, Temptation, is a variation on the Faust legend. In Temptation, a Dr. Foustka is a research scientist whose adherence to the supposedly noble cause of pure science ironically satisfies the technological demands of a repressive government. Not only is Temptation a commentary on the erstwhile Soviet empire, it is also a penetrating examination of universal human concerns: where does allegiance to personal morality begin and can one remain a moral being is one acts morally in personal life yet serves the interests of an immoral state.

Therefore, a course dealing with 20th century manifestations of the Faust legend allows for not only an examination of artworks of undisputed aesthetic quality, but also for a penetrating and serious exploration of ethical and moral issues which are increasingly becoming part and parcel of our everyday experience. As we enter the 21st century many of the magical deeds of Dr. Faust are becoming reality. If our students are not aware of the ethical and moral issues with which they will be confronted in the future, then they too will find that they have struck a Faustian bargain with the Devil. But this time there may be no "Eternal-feminine to lure them to perfection."

POETRY AND FORESTRY:
INTELLECTUAL INQUIRY AND PHYSICAL LABOR IN THE APPALACHIAN MOUNTAINS

Richard A. Hood

My course in literature and the development of culture requires students to live and work deep in the mountains of North Carolina. Students spend thirty hours per week working for the National Forest Service: building shelters, constructing trails and bridges, supervised by elderly, native Appalachian Job Corps workers. Class work begins in an overview of mountain traditions, literature from and about mountains, and the connections between ecology (which they are learning by the sweat of their brows) and culture: why does this place produce this culture? How does one "protect" both human tradition and natural ecosystem? Later, the course turns the focus upon the community that students have formed among themselves, living, as they do, in a remote mountain lodge, working and thinking as a group: what "cultural" roles does each member of the group play? What seems necessary to the creation of community? Have they developed "traditions?"

The course developed out of some rather fundamental ideas about the problems facing education today. None of these is particularly new or profound, and I have written of them elsewhere, but they may bear a brief introduction.

Our students' suspicion of literature and, sometimes, of the humanities in general, may be better founded than we might wish to admit. Students often find literature "boring," out of touch with their own interests and their own experience of the world. Meanwhile, we bemoan the loss of significance in the humanities, telling each other that *we* believe "literature should matter." Beyond expressing our earnest wish, though, we seem unable to do much more about it. (I recall a conference a few years ago where a presenter announced that, because "literature should matter in the world," his presentation on the aesthetics of James Joyce would be dedicated to the Sandinista government.) And so our students yawn and we complain. Add this to the growing disaffection of undergraduates--not just with the humanities, but with ambiguities in general--and we find ourselves whispering agreement with crusty old bastards like Hirsch and Bennett that education has lost its vitality and significance and that students have, indeed, become culturally illiterate.

Richard A. Hood, Assistant Professor of English, Elon College, Elon College, North Carolina 27244

When we look a little closer, though, it seems rather obvious that literature has disappeared from the world because we have removed the world from literature. This disconnection began with the hegemony of the New Critics, who opted for a self-sufficient literature divorced from contact with the maculate realities, and it has remained with us in spite of a dizzy variety of poststructuralist attempts to reintroduce world and text. Perhaps, though, we do need to remember that literature is a product of dynamically changing experiences of the world, and that response to literature demands a grounded meeting among readers and texts. Too often our literature classrooms create a kind of never-world in which students, and teacher, can float safely and freely apart from just such experiences. Well, no wonder, then, that students are disaffected: how can we expect a student who believes that he or she is immune to respond in any way at all to King Lear!

Clearly, we can't. And so, if we are to bring literature back down to earth, we ought perhaps to bring the earth back into contact with its literature--and put our readers into contact with both.

Out of these first principles and out of a lifetime spent performing and writing mountain music along with my less disreputable literary careers, I put together the course. Its location was in the Roy Taylor forest, more specifically, at Balsam Lodge, where we lived in the shadow of Rough Butt Bald, Wet Camp Gap, Charlie Bald, Gage Bald--the mountains of Transylvania County, North Carolina. Our stay at the lodge and the work component of the course I arranged through Ms. Laurie Shortess, chief ranger for the Highlands District of Nantahala National forest.

The lodge is isolated: we reached it by traveling about three miles south of the Blue Ridge Parkway, then some seven miles of winding dirt road. For our month-long stay, we were over an hour from supplies, medicine, etc.

The basic design of the course was simple: students worked from 8-5, Monday-through-Thursday (with some individual variation: each had a personal day off to work on course projects) with a Forest Service crew (Doc, Hazel and Roland supervised the work crew. Each is over seventy and a native of the Wolf Creek area; each is connected to the Forest Service through a Job Corps program that gives elderly residents some income as well as a certain amount of direct involvement in what is to become of their own landscape). The work involved construction of a large permanent shelter, a trail around Balsam Lake, and a thirty-foot span over a gulch, all designed to provide access to the mountains for handicapped citizens. The work was grueling and messy; students literally covered themselves in the land. (Meanwhile, they received an instant education in mountain culture. When Jennifer developed blisters on her first day with the Pulaski, Ruth advised that she find some bloodroot and rub the juice on the blister. This kind of oral history, linked as it was with the immediacy of the work experience, drove the message of cultural/environmental contact home in some rather profound ways.) The Pulaski mentioned above is the basic tool of trail building; similar to a mattock, it was originally designed for forest fire fighting. It has an axe head on one end and a hoe blade, of sorts, on the other. It digs, chops out roots, clears brush, etc. As effective as a tool as it is, it is also heavy and dangerous.

When work ended, students returned to the lodge for supper and coursework. We began in a study of the music, as that is the most obvious and dynamic part of mountain culture. From there, we moved through readings by and about mountain people, focusing to some extent on poetry (we read Fiddle, a long poem by Shelby Stephenson, and Phillipe Jaccottet's Selected Poems). Jaccottet is obviously not an Appalachian resident, but his poems are of and about mountains, and we used his text to try and broaden our view of mountain landscape and its connections to culture. We read a variety of descriptive writings, including Our Southern Highlanders and Mike Seeger's brief history of mountain music. Students were required to write daily in journals, to produce a more formal paper each week and to work toward a final project synthesizing their work experiences, their reading and writing experience, their living community and their observations during weekends.

On the weekends we travelled: first, to a bluegrass festival in Erwin, Tennessee, then to the home of an herbalist and environmental activist near Walnut, North Carolina, then to a family musical gathering (my relatives) near Johnson City, Tennessee. We further supplemented our classwork at the lodge with visits from writers and musicians.

II

Perhaps more significant than the structure of the course were its underlying cultural and pedagogical bases.

In Everything in its Path, his compelling study of the 1972 Buffalo Creek disaster in Logan County, West Virginia, sociologist Kai Erikson grounds his inquiry in a survey of Appalachian culture based on the concept of "axes of variation." Any culture, Erikson, asserts, builds itself out of complex dialectics of values and behaviors, such that any cultural characteristic contains, at least potentially, its opposite. Consequently, traditional definitions of culture, based upon the illusion that a given community can be "frozen" descriptively and viewed as a static entity are futile. In reality, says Erikson, culture is dynamic and can be most productively examined as a range of shifting points and counterpoints along thematic axes: "The mind that imagines a cultural form also imagines (that is to say 'creates') its reverse...Thus the idea and its counterpart become natural partners in the cultural order of things, setting up what I will call an axis of variation that cuts through the center..."(81-82). In other words, a culture that places great value on religious piety, for example, will have a rather highly charged concept of sin and will demonstrate behaviors that reflect both poles of this dialectic, along "axes of variation" between outright piety and "luxurious living."

The mountain tune, "A Picture from Life's Other Side," from which I have borrowed this particular description of "luxury," is a literary dramatization of these dialectics in operation. A religious song, it nevertheless follows the dialectic pattern so that, in order to present a sufficiently powerful image of goodness, it spends most of its literary effort depicting purely horrific sorts of evil: in one verse, a profligate son bets his mother's wedding ring at a final casting of dice (here, the mother's love is most powerfully expressed through the image of the son's wild abandonment of that love). The song's interest lies in the gruesome irony of confrontation and riotous license, all presented as a series of pictures from a mountain exhibition:

> The next was a scene of two brothers, whose lives were differently led,
> One was a luxurious liver, the other one begged for his bread,
> One night they met on the highway, "Your money or your life" was the cry,
> Then with his knife, took his own brother's life,
> Just a picture from life's other side.
>
> A picture from life's other side, someone that fell by the way,
> A life has gone out with the tide, that may have been happy someday,
> There's a poor old mother at home, just watching and waiting alone,
> Longing to hear from a loved one so dear, just a picture from life's other side.

This tune did not originate in the mountains, but it has been embraced by mountain culture, I believe, precisely because it does operate along these same axes. Many mountain tunes do, developing a powerful, though somewhat more subtle, movement particularly between the immediate and the transcendent, the present and the past, the sensual and the ethereal: "I brush the dew on Jordan's banks, the crossing must be near" ("Angel Band"); here the transcendent movement toward heaven is expressed in the sensual immediacy of the dew. Similarly mother's movement to heaven, in an old hymn, leads the persona to the dark silence of mountain time:

Near that dear old village churchyard,
I can see a mossy mound,
That's where my dear mother's buried,
In the dark and silent ground.
("The Village Churchyard")

These dialectics occur throughout the historical development of mountain music. A relatively recent version of the same pattern mourns the passing (to Heaven) of a loved one:

God's given us years of happiness here, now we must part,
And as the angels come and call for you, the pangs of grief tug at my heart,
Oh my darling, my darling, my heart breaks as you take your long journey.
("Your Long Journey")

We began in mountain music precisely because the music so clearly depends upon this dialectic pattern. As we encountered contemporary poetry, though, we found the same paradoxes, more subtly put. In the prologue to Shelby Stephenson's Fiddle, we saw a pattern of contrary reverberation between the place and the expression of place that led us into important questions about our own perceptions of landscape and culture. The poem begins with a search for "an image to make the world," and, in this search, to a return "back home" for "a word deeper than I." This search takes us to the immediate details of landscape and personal history, "one story, everywhere... and I said Where is the word that holds / All I am trying to say?" The answer comes: "and the cows lowed through their cuds over and over it is nothing but a song" (1).

A recognition of the fundamental truth of Erickson's sociological formulation--and of its manifestation within the cultural products of the mountains themselves--served as a valuable synthesizing principle for the course as a whole. It allowed for a productive approach to the mountains from a variety of perspectives and allowed us to formulate a critical view of our own participation in the course, in the landscape and in the literature. Ultimately, it opened the way for us to turn the course back upon itself, looking at the axes of variation established within our own developing community of students and workers.

III

One student, whose project involved a substantial photographic record of the course--leading to a powerful slide program about people and landscapes--demonstrated a problem that seems more or less true of all "outsiders" who approach the mountains as a place. The tendency of the "tourist" or the newcomer to the mountains, is to be overwhelmed by sweeping views, typified by overlooks on the Blue Ridge Parkway, at the expense of close-ups. One rather telling reason for this "long-shot" emphasis is the construction of the typical mountain tourist site itself:

the cleared overlook on the parkway, where workers have opened up a spectacular view across hundreds of miles of mountain peeks. Now, this is a viewpoint that never existed before the parkway crew cleared it. The actual mountain perspective tends to be closed in, rather than expansive (mountain songs sing far more often about dark hollows than wide horizons). Remove additions like the Parkway and we see that the expansive view is really a rare phenomenon arrived at only after a dark, enclosed hike of several miles. The Parkway itself has changed all this, demonstrating that, in a very significant way, the assumptions about the environment ("this should be a landscape of hugh, sweeping views") have created the character of the environment: where the sweeping view is obscured by the natural place, we open up a view, thus transforming the place to fit our presuppositions about the place, instead of vice-versa.

This was an important point for me to get across to the class, and, particularly to my aspiring photographer: "Don't get mesmerized by the grandiose at the expense of the delicate." We began this change of focus on the first evening in the lodge, by spending an hour looking at and writing about a Mountain Laurel blossom--a remarkable study of factors of fives-upon-fives, and by exploring relationships between the human perception of the object (the laurel turns out to be remarkably "human" in its decimalic organization) and the recognition of strangeness in the mutability of natural perspective (the multiplicity of its pentagonal "vistas" opens up really "sweeping" landscapes as one moves into the delicate scales of the blossom).

Such playful exploration serves merely to retune our perspective prior to the beginning of the actual physical labor within the landscape. The importance of the recognition of dialectics of perception cannot be overstressed, here. The landscape--what we see every morning when we walk out the back door--may play an enormous role in determining the actual state of our culture; conversely, and perhaps more significantly, though, is the fact that the culture--how we name what we see each morning--plays an equally important role in determining the actual state of our environment. (This becomes crucially clear, later, when we confront a forest service silvaculturist who has developed a new language based on a culture that identifies "useful" trees.) We must be sensitive to both poles of this paradox and to the "axes of variation" between them, if we are to understand anything very helpful about our place within the place: the culture we build out of the landscape and the land we transform within the culture.

Actually, we have already established a number of dialectical poles, all interacting in interesting, if only analogous, ways: transcendence/immediacy, vastness/delicacy, culture/place, and the daily rhythm of the course: intellectual inquiry/physical labor. This last connects significantly with the others, because the intellectual pole is analogous to the sweeping, detached view, the physical to the closely-focused sense of direct contact. This is literally true, too: one can't swing a Pulaski while admiring the "view;" one watches very closely the point where the Pulaski will land. Even more, the tool becomes an extension of eye, arm and hand and the user transforms perspective, moving into an expanded close-up landscape--like that of the laurel blossom--as one contacts earth, stone, tree root...the sweeping variations of a very small space.

IV

We have all become at least intellectually aware of the delicacy of the natural environment in its entirety. As the course pushed beyond its opening premises, we began to recognize and appreciate the delicate strength of our own communities, natural and human. Occasionally a reading would reconfirm the lessons of the Pulaski, as when Jaccottet articulated our own growing sense of the tragic presence of these forests and hills:

> There are trees down there, grass, a whole green world
> glittering in the morning, extinguished at night;
> as for the dozing mountains, fold upon fold,
> the eye sees straight through them, they are so slight. (51)

What we call "ecological awareness" took some interesting forms in such an experience. Once, a car load of our students, returning from the weekly "Brevard beer run," pulled a parkway litterer off the road and confronted him (in what, I have no doubt, was an unforgettable manner). "It's beautiful out here, isn't it?" Brownie asked him.

More to the point, students had to confront the questions of environmental impact implicit in the existence of the National Forest Service, and explicit in the ongoing battles over clearcutting, forest management, wilderness and roads, habitat and habitation. We spoke with and hiked with members of the Western Carolina Alliance and we read Mountain Treasures at Risk: The Future of the Southern Applachian National Forests, published by the Wilderness Society. This book indicts the Forest Service for its clearcutting practices. Following its lead, two of our students, Brownie Eidson and Morry Owen made an appointment with the Highlands District Silvaculturist and gave him one of the toughest interviews he'll ever had. Meanwhile, we read the Forest Service's "Fact Sheet on Mountain Treasures at Risk," its response to environmentalists' charges.

We found, in all of this, more evidence that landscape and community depend crucially upon each other. We found that how we treat each other may be a pretty accurate indication of how we treat our land. And vice versa. Part of the problem facing the mountains is indeed the language we use. The Forest Service speaks now of "desireable trees;" culturally, it has transformed trees to "products," thus changing the meaning of "desireable." The Wilderness Society has fallen prey to the same problem, perhaps in an attempt to speak the silvaculturists' language; and so, in a culture that "manages" its landscape, we discover a political battle over the "visual quality objectives." Is it surprising that this is Wilderness

Society--not government--language? (44) Worse, though, is the Forest Service response, which calls clear cutting "management activities" and defends its timer policies in a stream of disconnected euphemisms:

> Land management plans prescribe that approximately 60 percent of the National forest acreage in the Southern Appalachians is to be managed in a way that a casual observer would expect to see some limited disturbance to the visual landscape due to management activities. ("Fact Sheet," 9)

The exquisite dependency between landscape and language so celebrated by poetry ("This world is merely the tip / of an unseen conflagration," writes Jaccottet, 73) and by music ("For years they've been dead," writes Carter Stanley, "The fields have turned brown") can, we learned be easily brutalized, in either direction. Again, that is, the axes of variation are at work: language games can initiate environmental atrocities and environmental atrocities can invite language games. Once again, we learned that your land can change your language and what you call your land can change your land.

This led us to some rather intensive investigations of our own community. Living together in such isolation for a month, without television, radio, or newspaper (we had missed the June revolution in China altogether) we had necessarily developed something of a culture of our own. We had learned enough about our relationship to place that we had become interested in exploring the cultural roles and their contexts within our group and around our lodge. How we described our culture will not be terribly interesting to anyone who wasn't there (one investigative team made a basic breakdown between "philosophers" and "recorders," asserting that each member could be placed within one or the other category, then operating a dynamic of variation by which each assumed the other). What is interesting is that, almost a year after the course, the process remains: I have watched these students as they continue to reflect an awareness of these dialectics and their significance, both in their classroom work and in the world outside.

V

Obviously, such a course would have been impossible without the labor component merging with the intellectual to create a holistic experience of the mountains. A month-long stay in the mountains, even one including intensive reading and writing, would do little to forge any very lasting or significant connection between the place and the intellectual concept of the place. Moreover, such a stay would tend to increase rather than decrease students' sense of immunity: their ability to distance themselves from the environment and the culture by recognizing that they enjoy the luxury of study--a kind of intellectual distancing that protects them from the contact of physical labor--the removed vista of the tourist, separated from the contact of the denizen. Reversed, the same limitations appear: if students spend a month in the mountains on a labor crew, without supplementing labor with intensive intellectual engagement, they fail to transcend the immediacy of physical contact--they do not create sufficient intellectual removal to allow for consideration of their labor: what is it we are doing and why? What are the social, cultural and ecological landscapes within which my labor is done?

It is easy to find harmony in already vibrating strings attuned to "saving the earth." A mere sounding of intellectual sympathies does very little, though, only creating the kind of paradise deplored, in similar metaphor, by Wallace Stevens:

> Alas, that they should wear our colors there,
> The silken weavings of our afternoons,
> And pick the strings of our insipid lutes.
> ("Sunday Morning, 11.85-87)

Harmony, nevertheless, is, as Virginia Woolf reminds us, dependent upon two different notes, and harmony comes not from their unity, but from their difference. Her image seems to reflect that balance of perception that we sought in the course, the long view up and out to the peaks and the close view down to the laurel blossom, "that solace which two different notes, one high, one low, struck together, seem to give to each other as they combine" (61).

I believe this course has begun to make a way toward reestablishing contact between literature and world, body and mind, mountain and mountain culture. In reporting to me about the work my students did for the course, Laurie Shortess wrote that, "they set a new standard for volunteers in the forest." I do not believe they would have done so without the intellectual component of the course. Similarly, I read papers that were well above the usual standard for my undergraduates. I don't believe they would have been so without the labor component of this course.

"It is something," said one of my students, "to read poetry on a mountain. It is another thing to swing a Pulaski on a mountain. It is many things to ready poetry and swing a Pulaski on a mountain."

WORKS CITED

Erikson, Kai. *Everything in its Path*. New York: Simon and Schuster, 1976.

Jaccottet, Phillipe. *Selected Poems*. Winston-Salem: Wake Forest University Press, 1988

Jackson, Laura E. *Mountain Treasures at Risk*. Washington, D.C.: The Wilderness Society, 1989

Shortess, Laurie. Personal correspondence.

Stephenson, Shelby. *Fiddle*. Unpublished

Stevens, Wallace. "Sunday Morning." In Donald McQuade, ed., *The Harper American Literature, vol.11*. New York: Harper and Row, 1987, p. 1531.

United States Forest Service. "Fact Sheet on *Mountain Treasures at Risk*. Unpublished.

Woolf, Virginia. *To the Lighthouse*. New York: Harcourt, Brace Jovanovich, n.d.

SONGS

(Note: Most songs cited are quite common in mountain music, and have been recorded often.)

"Angel Band," Traditional (P.D.)

"The Fields Have Turned Brown," by Carter Stanley. Recorded on *The Angels are Singing*. Harmony LP 7377

"A Picture From Life's Other Side," Traditional (P.D.)

"The Village Churchyard," Traditional (P.D.)

"Your Long Journey," by A. Watson. Recorded on *The Watson Family*, Folkways LP 2366

LINKING CAMPUS ISSUES
WITH
INTERDISCIPLINARY STUDIES CURRICULUM DESIGN

Patricia J. La Noue

Introduction

The Carnegie Foundation for the Advancement of Teaching, in cooperation with the American Council on Education, recently conducted a year-long study of campus life.[1] Although the survey showed that, overall, most colleges and universities are "essentially well-managed and in good health", there is a growing concern for the diminishing "spirit of community" on the campuses. Ernest Boyer, President of the Carnegie Foundation for the Advancement of Teaching, in a speech to the National Governors' Association, presented five principles as guidelines for college and university administrators and others interested in strengthening a sense of community spirit in higher education on campuses:

A college or university, he states:

I. is, above all, a purposeful community, a place where the intellectual life is central and where faculty and students work together to strengthen teaching and learning on the campus.

II. is a just community, a place where the dignity of all individuals is affirmed and where equality of opportunity is vigorously pursued.

III. is an open honest community where freedom of expression is uncompromisingly protected and where civility is powerfully affirmed.

IV. is a disciplined community, a place where individuals accept their obligations to the group and where well-defined governance procedures guide behavior for the common good.

V. is a caring community, a place where the well-being of each member is sensitively supported and where service to others is encouraged.[2]

With respect to the curriculum itself, Boyer expressed concern that, while several colleges have expanded core requirements, too many students were failing "to see connections that would give them a more coherent view of knowledge and a more authentic, more integrated view of life."

Patricia J. La Noue, Assistant Director, Interdisciplinary Studies Program, University of Maryland Baltimore County, Baltimore, MD 21228

We, as interdisciplinarians, are well suited to addressing the concerns Boyer raises. Most of us are inherently interested in seeing relationships, integrating ideas and knowledge, and in making connections. The courses most of us teach already involve synthesis and integration of several disciplinary perspectives on a theme or subject. But we may not see the potential of linking what we teach to the context in which we work. Consequently, an experiment was recently conducted in an interdisciplinary studies seminar at the University of Maryland Baltimore County, a public institution of over 10,000 students, 80 percent of whom are commuters. We asked the following questions in planning a new course:

> Could a theme be related to a campus issue?
>
> Could a curriculum be designed to link academic content with an interdisciplinary problem-solving model?
>
> Could such a curriculum be administered within the principles set forth by Boyer for strengthening a sense of community spirit?

There were some risks in this approach:

> Would students be able to follow the guidelines established in order to keep from alienating campus personnel as they embarked upon their research?
>
> Would this approach be seen as "legitimate" by other faculty and administrators?
>
> Would the students actually be able to work together as a team, and, in such a short amount of time, respond to the guiding question in any substantive way?

There were also several advantages:

> Students are usually interested in knowing more about their school and would develop a better appreciation for the complexity of campus problems.
>
> It would be convenient with resources available.
>
> Students would hopefully learn that they can make significant contributions to the campus while still participating in some of the same academic activities.

For an Interdisciplinary Studies student, there were additional assets:

> The issues to be explored could be addressed with a multi-disciplinary approach. Students would be introduced to perspectives outside their disciplines and could gain an appreciation for expertise in these disciplines.

Students would be introduced to the rhetoric of other disciplines and would gain appreciation for the language decoding process.

Students and faculty from different academic departments would participate in a collaborate activity and get experience integrating material and using an interdisciplinary problem-solving model, all toward the benefit of their commonly-shared campus community.

What follows is a description of the seminar, the process model used and a short discussion of the results.

Interdisciplinary Studies Seminar

Selection of Guiding Question

Because of the growing interest among students and faculty in environmental issues and because of the willingness of faculty from biology, economics, geography, political science and visual arts to share their expertise by giving a presentation, we selected the guiding question: HOW CAN UMBC BE MORE ENVIRONMENTALLY SENSITIVE? There are many other options available depending on the interests of faculty and each campus situation. Examples of other guiding questions include:

How should this university respond to diverse student cultures?

Are this university's service functions effective for its external communities?

What should be the role of athletics and physical education on this campus?

How should the university's budget be determined?

What should all students know when they graduate from UMBC?

Course Description

Limited to 18 students, the Interdisciplinary Studies Seminar included students from a variety of disciplinary concentrations. Throughout the course students were encouraged to explore the epistemological distinctions among disciplinary cultures and their interrelationships and to build skills in critical thinking and the inquiry process.

The one-semester class met once a week for two and one-half hours. The first third of the course examined interdisciplinarity, in general, through readings[3], class discussion and debate.

Part two of the course featured presentations from faculty members representing five departments, selected because of their differing disciplinary perspectives and their areas of expertise on environmental issues. Their topics included: "A Historical Overview of the Environmental

Movement"; "The UMBC Campus: An Ecologist's View"; "An Artist's View of the Environment"; "Views from the Maryland Energy Office"; and "UMBC's Participation in the Environmental Decade: an Economist's View." Readings were assigned for each presentation,[4] and students were required to keep a discourse journal of unfamiliar terms which were shared at each session prior to the speaker's arrival. Students were also required to prepare for the guest presentations by writing several questions about the reading. The questions were about concept development, concept clarification, interpretation and analysis and factual verification as described in the article by John H. Clark, "Designing Discussions as Group Inquiry". After each lecture, students were asked to compare methodology and disciplinary treatment of the subject with earlier lecturers.

The final part of the class involved student participation in a problem-solving model which served as a guide to define and redefine the guiding question, explore and rank a range of responses, and finally, to choose a project for completion given the available time and resources.

Prior to beginning the process model, students were reminded of the cooperative nature of the process and given a short lecture on the characteristics of effective group behavior. Careful attention was paid throughout this third part to establishing a team spirit with respect for each individual's contributions.

Process Model

Step I. Analysis of the guiding question
The question is thoroughly examined. What is meant by each word? What are the sources of meaning? Would the meaning change with time and place? How is the question phrased? Why?

Step II. Brainstorm possible responses to question
Use the guidelines for effective brainstorming. All ideas deserve a hearing. No interruptions. No judgments. Generate a long list on tear sheets and place around the room.

Step III. Determine criteria for responses
What are the resources available? How much time is involved? What are the risks and benefits? What are the constraints?

Step IV. Discuss the responses in light of the criteria

Step V. Rank the responses
Pass out index cards, and with tear sheets still displayed, ask students to privately rank their choices 1 through 5. Cards are submitted to be tabulated without student

names. When all responses are submitted, cards are read by instructor and a student is asked to place a number indicating the rank next to the suggestion. After each card has been tabulated, numbers are added. Those suggestions with the smallest total number are those most favored at this time. Save tear sheets.

Step VI. Students research and prepare report for next class
Students are to select one or two ideas and do some investigation as to the feasibility of the idea for an oral presentation in the next class. Students are reminded to consider the criteria agreed upon in Step III.

Step VII. Student reports
Oral reports and discussion in terms of criteria.

Step VIII. Rank the ideas
Instructor hands out cards again and students rank the ideas second time. Tabulations done as in Step V.

Step IX. Selection of project/s
Students choose to work as one large group on one project or to divide into smaller groups to work on two or three projects.

Step X. Groups work on projects

Step XI. Presentation to class

Step XII. Implementation

Step XIII. Evaluation and Debriefing

Results

The benefits of involving students in this experiment have been substantial and interest in "How UMBC Can Be More Environmentally Sensitive" continues. Many of the faculty and staff who participated in the seminars's activities have voiced a willingness to continue to be involved. The student newspaper in two separate issues reported on the increased interest in environmental issues on campus. The president of the university began mailing environmentally-related material to the instructor of the seminar.

Most rewarding, however, were the legacies left to the campus by the seminar students. In light of the mandate that all projects were to be completed by the last day of class, the students decided, in Step IX, Selection of Projects, to focus on three of the top-ranked ideas.

One group compiled a Resource Manual for the campus of local recycling firms, environmental organizations, and a listing of contact persons specializing in different environmental issues.

A second group compiled a list of suggestions for reducing waste and improving the campus ecological environment generally. The students presented their suggestions to the university's Vice President for Administrative Affairs, who responded with gratitude and a commitment. He agreed to:

1) Contact the purchasing office and request they examine State of Maryland purchasing regulations regarding purchase of recycled paper products.

2) Send administration memos on recycled paper, printed on both sides, to demonstrate commitment.

3) Remind faculty and staff about use of WOW boxes (for recyclable paper).

4) Keep faculty and staff abreast of archeological study and survey research parkland.

5) Keep faculty and staff abreast of plans to develop wetlands and/or any other ecological enhancement project.

6) Encourage Food Services to determine how they can reduce waste and increase recycling. (e.g. 5 cents if you bring your own mug!)

7) Encourage the bookstore to sell more recycled items.

8) Encourage the Retriever, the campus newspaper, to use recycled stock.

9) Work with the newly-formed student organization, Students for Environmental Awareness, to identify locations for recycling bins and yard boxes.

10) Encourage recycling of discarded typewriters, copying machines and other office equipment.

11) Emphasize enforcement of environmental safeguards to contractors working on campus.

12) Keep in touch with students on a regular basis concerning campus environmental issues.

Within three months, most of the suggestions had been addressed.

The third group founded a new student environmental organization. They wrote a constitution for S.E.A., Students for Environmental Awareness, which they promptly presented to the Student Government Association for approval. During the semester the group made contact with the representatives from other student organizations and rallied strong support for the proposed organization from the Anthropology, Biology, Geography, and Political Science Councils of Majors, and the charter was approved one week before the final exam.

Three members of the class were voted in as S.E.A. officers, and are enthusiastically pursuing an agenda which includes several of the ideas from the course. In the first three months of S.E.A.'s existence on campus, it has drawn from 45 to 65 students to its general meetings. The group has sponsored a Saturday morning cleanup and a bake sale and have planned 5 days of Earth Week activities. With the help of a biology professor, S.E.A. members are also conducting a water quality assessment of the watershed which runs through the campus.

Conclusion

Overall, the experiment worked. Students at UMBC, like students on college and university campuses nationwide, spend a substantial portion of their week at jobs. After completing their academic work, there is often little time for making contributions to worthy causes on or off campus. This does not mean, however, that they do not care or that they lack interest. Offering students an opportunity to make contributions and to use their talents within an interdisciplinary academic framework may be one way of building the spirit of a caring community.

References

1. To be published in April, 1990.

2. Boyer, Ernest. "In Search of Community", a speech delivered to the National governors' Association, January 18, 1990.

3. Reading list for Part I:

Becher, Tony. "disciplinary Discourse", Studies in Higher Education, Volume 12, No. 3, 1987.

Benson, Thomas L. "Five Arguments Against Interdisciplinary Studies", Issues in Integrative Studies, Volume 1, 1982.

Bingham, Nelson E. "Should We Have Interdisciplinary Majors?", Issues in Integrative Studies, Volume 1, 1982.

Boulding, Kenneth, "The Future of General Systems", Interdisciplinary Teaching, Alvin M. White, Ed., (Jossey-Bass, Inc., 1981).

Clarke, John H. "Designing Discussion as Group Inquiry", College Teaching, Volume 36, No. 4.

Campbell, Joseph. "Myth as Messenger". Video.

Cousins, Norman. "the Poet and the Computer", National Forum, Spring, 1989.

Ferguson, Marilyn. "Asking New Questions", Study Guide to the Aquarian Conspiracy.

Lueders, Edward. "Beyond Specialization, Writing for Readers", National Forum, Spring 1989.

4. Reading list for Part II:

Benedict, Richard Elliot. "Diplomacy and the Ozone Crisis", G.A.O. Journal, #6, Summer 1989.

Catton, W. R., Jr. and Dunlop, R.E. "New Ecological Paradigm for Post-exuberant Sociology", American Behavioral Scientist. 24, #1 (1980).

Felshin, Nina. "Disarming Images", May, 1984.

Hardin, Garrett. "The Tragedy of the Commons", in The Environmental Handbook, Ed. Garrett DeBell, Ballantine Books, Inc., 1970.

Vitelli, Karen D. "Report of the Excavation at UMBC Site 18-BA-71" Miscellaneous Papers No. 10; The Archeological Society of Maryland in cooperation with UMBC, June, 1975.

White, Lynn, Jr. "The Historical Roots of Our Ecological Crisis". Sciences, 10 March 1967.

Yergin, Daniel. "Energy Security in the 1990's", Foreign Affairs, Fall 1988, Volume 67, #1.

Zube, Edwin H., Environmental Evaluation: Perception and Public Policy, Cambridge University Press, 1984.

REENTERING ADULT STUDENTS:
THE INTRODUCTORY GENERAL EDUCATION COURSE

Callistus W. Milan

Introduction

Adult educators have stressed that the returning adult students must overcome numerous barriers to succeed. One of these barriers deals with reentry into the world of academia. Being away from the academic milieu for months, years and even decades places the student at a serious disadvantage. What was once a "small step" from high school to college becomes for the adult student a "giant leap." At one time the role of student was a fulltime identity. When asked the question "What do you do?", the response was easy. "I am a student." The answer had implications and meaning that were well recognized by all who heard. However, for the one who may have "stopped out" (dropped out has such a negative connotation!), the intervening years between "college days" have brought new identities and new tasks. Father-mother, wife-husband, real estate agent, salesperson, wage-earner, etc. have identities of their own and their own corresponding tasks. Now the reentering student assumes another identity working student. This new role cannot replace the other roles, but in some way this new identity must be developed along with the others rather than in place of them.

In the late 1960's, Ottawa University recognized the need for curriculum changes for its traditional students on the residential campus. Academic advising combined with much student input produced a student's individual educational plan. The jury is still out on how successful this program is for the traditional students. However the University saw the potential for this type of program for adult students. These are students who have had the experience of the real world, have the knowledge of what is needed in a degree plan, and possess the tenacity and dedication to complete the plan as developed. Even though the program looks quite attractive for the returning students, the need to overcome the academic barriers is still evident. It is with this background that the University developed the General Education sequence of courses and in particular the Proseminar as the first General Education course for the reentering adult students.

Callistus W. Milan, M.A. Associate Professor Education, Ottawa University, 2340 West Mission Lane, Phoenix, AZ 85021

The Proseminar

The process of admitting a new student to the Center's program involves a number of steps. Upon initial inquiry, the prospective student receives information about the degree program accompanied by a letter from the Provost of the Center. The letter invites the student to schedule an appointment with a faculty member to discuss his/her degree plans. After this initial "intake" interview in which degree programs and degree requirements are discussed and transcripts often evaluated, the student is informed of the date for the next Proseminar. (The Proseminar is offered at least eight times during the year.) The student who submits an application for the degree program is entered on the roster of the next available Proseminar. Enrollment in the Proseminar is limited to about twenty students. It is worthy of note that the student's first contact with Ottawa University is with a faculty member who is responsible for teaching the Proseminar. The knowledge that there is someone who will be "my" adviser throughout the program gives comfort and satisfaction to the prospective student. Further it should be noted that students are not permitted to enroll in any other courses until they complete the Proseminar.

The goals of the Proseminar are quite clear:

- engage students in group interaction and critical thinking through issues related to adult development, self-assessment, and goals development;

- identify and develop learning skills necessary for continuing adult learning;

- assist each student in a process of assessing his/her prior learning, skills and knowledge, values and goals;

- assist each student in declaring his/her educational and vocational goals.

The eight weekly sessions of the Proseminar are organized around topics related to the concerns of the adult student. In the early sessions of the course, adult learning theories are discussed. Readings from Knowles, Brookfield, Cross, Merriam, Houle and others give the adult student the opportunity to view themselves as "learners in a new setting." The question "As an adult student, how am I different?" receives considerations that make these sessions not only interesting but also instructive as the students assess their own learning experiences and learning style. A class on "Adult Life Stages" focuses on those stages of life when decision-making and career choices become paramount. The need for good oral and written communication is emphasized in a class devoted to these skills. A look at society along with citizens' responsibilities as members of that society constitute at least one class session. Work and leisure in contemporary society are studied in depth while the class on "values" present an occasion for the students to confront their values and value systems.

Class discussions are based on common readings selected to support the development of skills and interaction with other students concerning ideas, values, and styles of learning. Critical reading is emphasized by all the instructors of the Proseminar. Short writing assignments are a further reflection of the reading assignments and class discussions. In these assignments students have the opportunity to improve their writing skills and engage in critical thinking on issues that are contemporary and personal.

The Learning Autobiography

As an integral part of the Proseminar, students are required to write a Learning Autobiography. As a course requirement, the Learning Autobiography serves as an indicator of the writing skills the student possesses. It is a required assignment in the sense that to receive a grade in the Proseminar the student must complete the Learning Autobiography along with other assignments.

The purposes of the Learning Autobiography are many: (1) to provide the opportunity for the student to demonstrate writing ability; (2) to provide the occasion for the student to reflect on and assess previous learning environs; (3) to evaluate the student's strengths and weaknesses; (4) to plan for future educational experiences; (5) to assist the faculty adviser in participating in these educational experiences; and (6) to build confidence, mutual respect, and trust in the student-adviser interaction.

The assigned topics for the Learning Autobiography go much further than the demonstration of an ability to write coherent and cohesive paragraphs. The six areas assigned for the students to write about are: (1) Formal education experiences that have been meaningful for you; (2) Persons who have been or are "models" or "mentors" in your lives; (3) Events that contributed most to the kind of person you are today; (4) Informal learning, skills and abilities that you have gained from your life experiences; (5) Future goals educational, professional, and personal that you hope to accomplish; (6) Philosophy - those ideas, principles, values, or ideals that are most important to you as an individual.

Although the procedures for completing the Learning Autobiography are manifold they are not complicated. At the first class, the instructor furnishes the students with an outline of topics. The handout given to the students provides some aids that provide assistance in writing the Learning Autobiography. The key verbs in the process of developing the Learning Autobiography are choose, describe, reflect. Choose a particular happening; describe what occurred; reflect on the importance of the experience. The students are asked to stand back and consider the meaning of a person or an event that has been chosen in terms of one's needs, aspirations, development, and ideals.

It is important that the student feels that the assignment is beneficial beyond the value of "writing practice." Each instructor employs singular techniques to emphasize the worth of the assignment. Non-threatening expressions are an integral part of the instructions. There is no "number of pages" obligation nor is there any numerical count of persons, events, goals, and the like that are to be listed. This open-ended approach provides sufficient opportunity for the students to reflect as they deem suitable.

Student responses, with few exceptions, have been gratifying and, at times, overwhelming. "Nothing of import" in my life may become a Learning Autobiography of great depth and merit. Anonymous comments from previously written Learning Autobiographies indicate the value and worth of the experience. One student may have given the appropriate definition to the Learning Autobiography by stating in her introduction to the finished copy: "I moved from asking the question 'Why am I doing this?' to 'Why haven't I done this before?'"

Conclusion

Of all observable outcomes of the Proseminar, the most impressive is the change in the way students perceive themselves. Uncertainty about the ability to succeed, the threat of college studies, the remembrances of bad experiences in previous college work, and the risk of failure slowly disintegrate as the reentering students complete the Proseminar, and continue with their degree plan. What was fear becomes confidence and trust; what was meaningless experiences, become profound happenings. For the adult student, learning has direction and guidance because of the commitment to a degree plan whose foundation is in the Learning Autobiography.

The degree program of the Phoenix Center has been highly successful during its ten years of existence. Approximately two/thirds of the students who completed the Proseminar have received their baccalaureate degrees. When one considers the number of students who annually relocate and the number of students who are forced to withdraw from the program, the graduation rate is impressive. Graduates of the program indicate several reasons for their success. First, the Proseminar is cited as so important in establishing confidence and self-esteem. Second, the advising process is a continuing occurrence from the start of Proseminar until Graduation Day. Third, the atmosphere of the Center is conducive to adult learning and development. "We are treated as adults" is a common observation of the students. The faculty's own view of the success rate centers on the Proseminar, a most important link between past educational experiences and a model present-day adult program.

AVIATION AND CULTURE:
GLORY IN A NEW KEY

J. Roger Osterholm

Introduction

Aviation has long satisfied a need for glory and heroism, whether in the aviator or in the spectator but now aviation, like most of our civilization, has become so intricate and complex that the excitement is diminished. pilots and others in aviation today are highly skilled, but they have lost some of the freedom and individualism of yore and, with it, they experience less satisfaction. To heighten the sense of adventure, most people today will have to be better educated to imagine and especially participate in advancing our technological society, including aerospace machines. The spectators or dreamers will feel increasingly frustrated as their untutored abilities render them helpless to enJoy even dramatizations of the coming adventures. But the sophisticated machines, and most notably those in the aerospace industry, can help inspire them to attain the requisite knowledge, not only to dream along with the developments but also to participate in advancing knowledge. Hardly any field but aviation offers the popular motivation for most people to want to learn enough to keep up, and thereby again experience glory and heroism, but in a new key.

Aviation and Culture

One major premise we begin with is that people need a sense of mystery and glory in their lives, whether it be actual or simply through reading a dramatic novel or watching an exciting film. There were glory and heroism in airplane pilots of the 1930s that hardly exist today. But what does that mean to contemporary culture and more specifically to contemporary education? Aviation reflects many cultural traits though not in the high culture as much as in the more popular culture. We scarcely recognize how much aviation dominates much of the mass media and arts and we only slightly more recognize how much aviation dominates much of our daily lives.

Aviation is relevant to education and the theme of this conference: "What if the university took learning seriously?" The staff at Embry-Riddle aeronautical University has long recognized that for many students aviation is itself a motivator that some marginal students become even over-achievers when their studies relate to flying, aircraft maintenance aeronautical engineering,

---

John Roger Osterholm, Professor of the Humanities, Embry-Riddle Aeronautical University, Daytona Beach, Florida 32114

avionics, computer simulations, airport management or even aviation journalism--whatever involves them in aviation. The Smithsonian Institution offers useful programs in applying the excitement of aviation to primary and secondary education, and the National Aeronautics and Space Administration has a useful education department that offers further material for any teacher who wants to include it.

Aviation even appeals to the aesthetic sense for the airplane is truly a beautiful machine. Pilots often feel that a plane that looks beautiful will fly well. And today, when the basic aeronautical principles are mastered and even understood by the general public, the airliner, the supersonic jet fighter the helicopter, even a hot-air balloon and a private light airplane remain physically attractive. The airplane contributed to the style of Art Deco and to the obsession in the 1930s with streamlining (Mumford 350-53).

But how exciting is aviation today, and how does that relate to contemporary culture and to interdisciplinary and non-traditional approaches to studies? The grass seems greener in the next Yard. In aviation the view &rom the ground yet involves perceptions of glory and heroism, but the view from the sky, however entrancing and majestic, has now less glory and feels somewhat less heroic.

Of course there remains a glamour and a heroism about the aviator today, but they are mere shadows of those qualities of days gone by. I fear that many young students in aviation think the glamour and heroics remain what they used to be and some of them become disappointed when they learn that piloting a high-performance aircraft requires hours of the most exacting training and that aviation involves as much routine as a career with an insurance company. Airlines began to realize as early as 1935 that their pilots would have to be responsible, disciplined, professional managers, no longer daredevils and misplaced cocky fighter pilots (Solberg 174-78).

Large airliners today like the Boeing 747 and 767, can land themselves put on the reverse thrusters, and automatically apply the brakes with the captains and first officers as little more than watchdogs or--as engineers like to call them--systems managers. A modern jet fighter has avionics that receive coordinates of primary and secondary objectives and the home base. A fatigued or injured pilot merely pushes a button to select the home field and the aircraft automatically flies there, possibly two thousand miles away.

One reason General Chuck Yeager was not interested in becoming an astronaut was that, especially at the outset of our manned missiles' the pilot with "the right stuff. was mere "Spam in the can" (Wolfe 64, 251-52, 352). The Mercury Seven astronauts did succeed in graduallY gaining a pilot's control over the space capsules, but the engineers were convinced the astronauts were primarily passengers--until the engineering failed and astronauts had to take manual control (Wolfe 188, 203, 284, 309, 314-17, 342-44, 366).

Consider the heroic aviators like Lindbergh, Amelia Earhart, Howard Hughes. What have we like them today? Even the astronauts shine for 15 minutes of Andy Warhol's idea of fame. In March the famous SR-71 Blackbird, on its retirement from the U.S. Air Force made a record-setting dash across the continent in about 68 minutes, but the public applauded the powerful aircraft much more than they did the pilot. Herman Melville well noted this inherent drift in technology even in the Civil War, when he wrote in his poem "A Utilitarian View of the Monitor's Flight":

> . . . plain mechanic power
> Plied cogently in War now placed--
> Where War belongs--
> Among the trades and artisans.

And in the fifth and final stanza:

> War yet shall be, but warriors
> Are now but operatives. . . .
> (61-62)

Gone also are the days when most aviators thought of their flying machines as sensate beings and flying as akin to prayer and worship.

The few famous pilots today include the mystical Richard Bach heroic Chuck Yeager and a few aerobatic flyers. The famous unrefueled around-the-world flight of Richard Rutan and Jeana Yeager in December 1986 is the latest exception, which "proves" my point. The special light aircraft designed by Rutan also suggests that the nine-day flight was especially an example of brilliant engineering, although the heroics were genuine.

The issue is clarified by a comparison to the railroad which until 1950 was also a glorious industry. Today a freight train is more a nuisance that constantly threatens bankruptcy. It is advances in technology and safety that have dulled the shine, even the luster of the vicarious engineer. The steam locomotive was a powerful engine that enchanted many people. Diesel engines are even more powerful today, but we have grown accustomed to the power and the safety of the technological achievements.

Safety is one of the major keys. Glory and heroism involve danger. Today the greatest danger in railroading is a drunken or drugged engineer--a similar observation could be made of the dangers of the ocean's supertankers. Until about 1960 or 1970 there was a significant danger in flying, for aviation was still coming of age. Just consider the disastrous British de Havilland Comet jetliners of the early 1950s (Jane's 317; Solberg 380). The wood, wire, and fabric biplanes of the 1920s, the fast fighters of World War II, and even the first and second generation jet fighters and jet airliners were all too little understood and the jets had low-powered engines. The test pilots and even the regular pilots of operational aircraft had to screw up their courage to fly them. But a different courage is in order for a glory and heroism in a new key, whether that be as a participant or an admirer.

Gradually the dangers lessened, until today when most of the principles are refined and aircraft have become mundane. Even today's jumbo jetliners scarcely cause most passengers to tense up. The largest are so huge that passengers are hardly aware they are flying and terminal gates are so constructed that passengers hardly ever see the outside of the airliner. True, the DC-10s have suffered some spectacular mechanical and engineering failures--more than other present-day airliners--but they still fly regularly with full loads and add revenue to many major airlines. The accidents and failures are very few and very far between.

The safety of airlines has become legendary. In the early 1930s one major airline lost five percent of its air crews annually (Solberg 174). In the 1930s airline deaths in the United States were commonly 3.0 to more than 20 annually per 100 million passenger miles. In the 1960s that rate fell to about 0.3, or one-tenth the rate of the 1930s (Historical Statistics II: 774). In 1980 it was virtually zero. In 1987 the rate for U. S. airlines was 4.3 fatal accidents for ten million departures; in 1976, a good year, it was 4.1. Since 1940 highway deaths average about 220 per year for every one million people--and even this great excess in automotive fatalities is hardly due to engineering.

The DC-3 was a primary airliner, built from 1936 to 1947, and remained common to 1980, but it also at first took some courage to pilot and to ride. Airplane passengers were themselves heroic in the 1930s.

In the arts aviation is regularly romantic sometimes quasi-religious, sometimes realistic, but seldom post-modern or nihilistic. The anxieties portrayed are basic, of the fight-or-flight variety not over-intellectualized analyses of cosmic meaning. Similarly, aviation in society (in engineering and commerce) is also eminently practical or pragmatic--more like the automotive or abstruse computer industries, but unlike the theater academia or the art world.

To demonstrate the difference between the images of aviation then and now, let's consider two average films: Central Airport of 1933 and the recent television movie Miracle Landing.

Directed by William Wellman for First National, Central Airport stars Richard Barthelmess as Jim Blaine, an airline pilot who braves a storm, cracks up, loses his air transport pilot's license, and becomes a stunt flyer for an air circus when he falls in love with Jill Collins (played by Sally Eilers) the parachutist for the show. Scorning marriage, Jim loses her to his younger brother Neil (Tom Brown) who is a responsible but lesser stunt pilot. Neil soon becomes an airline captain flying from Havana to Mexico as Jim spends years flying as a mercenary in China Russia and South America. A tardy reunion occurs in Cuba with Neil away, and Jill nearly succumbs to Jim's charms when they learn that Neil is down off the Florida Keys in a storm. Heroic Jim flies his bullet-riddled amphibian to rescue the two pilots and two surviving passengers--a drunk perishes in the seas. All Havana participates in driving automobiles in a fog to light an emergency field so Jim may land his aircraft at the last moment and the next day he flies away alone, knowing that he was too much a temptation for Jill.

Jim is the image of the tough guy of the 1930s and also of a Melvillean "isolato," the person freed by civilization and technology only to confront a threat to primal instincts themselves (Vincent 58-63). He is the superb pilot with courage to spare in a dangerous occupation--and implicitly not enough responsibility or discipline. He once tells Jill that a pilot has no business marrying, but also that he would make love to her. As he puts it, "Just because you're hungry, you don't have to buy a restaurant do you?" At the end he regrets his choice, but leaves to save his brother's happiness. In all this, aviation is exciting, dangerous, and especially a matter of initiative and individualism.

Miracle Landing, a two-hour television movie on the CBS network, depicts the incident of April 1988 in which a twenty-foot section of the cabin ripped off from a Boeing 737 flown by Aloha Airlines, a name changed for the movie. The film portrays the nerve and training required of a realistic airline flight crew to meet the infrequent emergency but absent is the melodramatic individualism common in similar films of the 1930s. The principal theme is that a professional airline captain can often save a well-built airliner but also that such training is seldom applied. The usual pilot is like a soldier that is fully trained but never goes to war, and if he did he would mainly push buttons. The sense of heroism is diminished.

Aviation remains compelling in high flight and in dramatic productions, heroic from Kitty Hawk to beyond World War II, but recently it has become more realistic, often abstruse sometimes an image of futility or of mass destruction--but not meaninglessness, not an image of nihilism. In many ways the airplane remains a romantic and liberating machine, what all machines are supposed to be. In recent films, the romance of aviation is seen usually in an escape to the old days--consider also the popularity of air shows of vintage aircraft. The romance is sometimes also observed in a fantastic future of aerospace fighter pilots, but less so in the realism of today. Aviation, like our society, has become practical and integral to the economy and to much contemporary science. Even the astronauts are now technological pioneers, unlike the test pilots of old who almost recklessly challenged death in their mysterious machines. And the flying machines that were designed to "loop the loop" have been replaced with intricate and automated means of transportation.

What does this mean to contemporary culture when people still need excitement and a sense of mystery in life? The Newtonian sense of precise order in the universe is challenged by advances in high-energy physics and quantum mechanics, which add a mystery to nature but where is the challenge the excitement the mystery of common life? Do we ally ourselves

362

with "The Moral Equivalent of War" according to William James in 1910 and President Jimmy Carter more recently and find excitement in opposing scarce warmongers, heroism in housing the homeless, glory in feeding the poor, adventure in teaching the illiterate to read, and awe in aiding the derelicts that take up housekeeping in airline terminals? Is there danger beyond scant terrorism at airline counters? Is there routine excitement in flying? Is there exoticism in discovering an occasional stowaway? Hardly. Are the honorable challenges of caring for the social ills to become the food for the imagination for the hero or heroine, for the dreamer for the vicarious aviator? For the doer and the dreamer, for most of us these are not dramatic enough, especially for one's vital fantasies.

Today heroism and mystery reside more often in science, engineering, and grand social and commercial projects in which rugged individualism is secondary. This also alerts us to the need for better educated rising generations, for the mathematically and scientifically illiterate will not be able to participate. For the functional illiterates, life will become increasingly vapid, sterile, futile, even nihilistic and instead of mystifying merely confusing.

Are our young students to find excitement mainly in death-defying motorcycle tours through town? How to tame or satisfy the Freudian death wish? In death-defying flirtations with debilitating drugs? Some will thrill in placidly serving society by feeding the poor and demonstrating for ecology and safer technology, as with nuclear power plants but what of the majority? Saint Francis is a scarcity even in the Roman Catholic circles. Many people work in such endeavors, and they find deep moral satisfaction in doing so, but even most of these need dramatic stimuli for their imaginations in a materialistic age and for adventure in a society that seems beyond personal influence.

Against the popular American values of me-first, disregard for others, wealth as success, fame as importance, and pleasure as happiness, society must once again emphasize the glorious and the heroic, not so much in piloting and riding in powerful and amazing machines, but in the cutting edge of knowledge where the great adventure has always been. Like all productive enterprises today aviation is an industry that requires extensive cooperation and teamwork. Today everyone must be rational, civilized, and well educated, and what applies to America applies to the West and to the whole world, which now largely imitates the West and particularly America.

There have always been but few Lindberghs, Robin Hoods, Andrew Carnegies, Alexander the Greats, or Abraham Lincolns. Political and economic power, which attracts capable statesmen and executives, also attracts the ambitious self-servers, the less intelligent, and the less than scientifically capable, but the contemporary drift toward true and effective democracy even restricts the Hitlers, Stalins, Joseph McArthys, and the robber barons of tomorrow. Most people will have to be honorable and able to find adventure through a sound education. Only intellectuals find excitement in the life of the mind, but most well-educated people can find thrills in technological progress.

Social and industrial leaders find the rush of excitement in the exercise of power, but what of the average people who used to find it in bailing wire and fabric-covered wings, whether as participants or spectators (now the "couch potatoes")? More often in the future, they are going to find a comparable excitement primarily in working in the laboratory, in the wind tunnel, at the drawing board, or at the edge of the universe--the glory and heroism in the new key. Hence, we must take teaching and learning seriously and aviation is one field that palpably demonstrates the fruits of knowledge. But the poorly educated vicarious pilot can hardly imagine the thrill of designing or controlling today's aircraft, for these planes are already too complex even for effective dreaming.

Effective instruction is a teacher's rush, sending the new generation onward to its glory. And although heroism may now be somewhat less in piloting an airliner or controlling a supersonic fighter, it is often in aviation--managing the enterprises and studying, testing, and designing the machines that will carry pioneers to the edge of knowledge. And this is the glory and heroism that will derive from our teaching and student learning, the new key to be celebrated in the popular arts.

Works Cited

Central Airport. By Rian James and James Seymour, adapt. from *Hawk's Mate* by Jack Moffitt. Dir. William A. Wellman. With Richard Barthelmess, Sally Eilers, Tom Brown, Grant Mitchell, and James Murray. First National Pictures, 1933.

Historical Statistics of the United States, Colonial Times to 1970. 2 vols. Washington, D.C.: U.S. Dept. of Commerce, 1975.

Janes's Encyclopedia of Aviation. Ed. Michael J. H. Taylor. New York: Portland House, 1989.

Miracle Landing. By Garner Simmons. Dir. Dick Lowry. With Wayne Rogers, Connie Sellecca, Ana-Alicia, Nancy Kwan, James Cromwell, and Jay Thomas. CBS Entertainment Productions: CBS. WCPX, Orlando, Feb. 11, 1990.

Melville, Herman. *Battle-Pieces and Aspects of the War*. Facsimile ed. Gainesville, Fla.: Scholars' Facsimiles & Reprints, 1960.

Mumford, Lewis. *Technics and Civilization*. Rev. ed. New York: Harbinger-Harcourt, Brace & World, 1963.

Solberg, Carl. *Conquest of the Skiers: A History of Commercial Aviation in America*. Boston: Little, Brown, 1979.

Vincent, Howard P. *The Trying-Out of Moby-Dick*. Carbondale: Southern Illinois UP, 1949.

Wolfe, Tom. *The Right Stuff*. 1979. New York: Bantam, 1980.

AN ACADEMIC/EXPERIENTIAL APPROACH TO SERVICE LEARNING

Susan L. Roberts
Wilhelmenia I. Rembert
Joseph S. Prus

Introduction

This paper provides an analytical description of the conceptualization, implementation and assessment of an undergraduate course in public service. The first section addresses the processes and problems associated with the introduction of an interdisciplinary, non-traditional course into the college's general education curriculum. The course provides students with both an academic orientation to public service as well as first hand experience as service givers with private and public agencies. The second section addresses the content of the course and the placement of students. The course has as its major objectives the encouraging of both critical thinking and practical experience with respect to concepts of citizenship and social responsibility. In sum, the course examines the theoretical, historical, practical, and political aspects of volunteerism. The third section identifies the proposed procedures to assess the accomplishments of the program as a whole, as well as the attitudes, achievements, and perceptions of the students and other course participants. As an increasing number of colleges and universities are heeding the call to incorporate service components into their undergraduate curricula, this paper will contribute to the ongoing development of service learning options.

Background

In their 1963 work *The Civic Culture*, Gabriel Almond and Sidney Verba found that the concept of good citizenship carried with it a heavy presumption of participation and genuine civic involvement. Concepts of citizenship and social responsibility have long been part of the ethos of American democracy. Alexis de Tocqueville observed over 150 years ago that Americans adhere to a doctrine which he termed "self-interest rightly understood." According to Tocqueville, Americans "show with complacency how an enlightened regard for themselves constantly prompts them to assist one another and inclines them willingly to sacrifice a portion of their time and property to the welfare of the state"(Tocqueville; 1945:130).

Dr. Susan L. Roberts, Political Science, Winthrop College, Rockhill, South Carolina 29733
Dr. Wilhelmenia I. Rembert, Social Work, Winthrop College, Rockhill, South Carolina 29733
Dr. Joseph S. Prus, Psychology, Winthrop College, Rockhill, South Carolina 29733

Recent studies, however, reveal that a significant portion of the American public believes colleges and universities are not serving as crucibles of citizenship for students. For example, a 1989 Gallup Organization survey entitled "Attitudes About American Colleges" found that only one-third of those questioned thought that higher education institutions adequately prepare students to be good citizens. Similarly, only 40% believe students are given opportunities to actively explore their values.

In the spirit of Tocqueville, Winthrop College has become the first institution of higher education in South Carolina to establish a for-credit academic program in volunteerism as part of its undergraduate curriculum. Although other institutions encourage and acknowledge volunteer activities by students, Winthrop is one of only a handful of institutions nationwide which has acted on its own accord to award academic credit for a seminar/service component. With this course, "CVS 201: Introduction to Community Volunteer Service", Winthrop has received further national attention as a recipient of a grant from the U.S. Department of Education for the establishment of a "Student Literacy Corps."

Curriculum Change

In the fall of 1988, an interdisciplinary committee appointed by the Vice President for Academic Affairs, began investigating the possibility of a course concerned with student volunteerism and community service. The description of curriculum change focuses on the nature of interdisciplinary planning, the approval process, and the administrative challenges of such a course.

Initial meetings of the committee, which included faculty members from a variety of disciplines and academic units, focused on the concept of a public service course and the role it should play in the undergraduate curriculum. Because of the interdisciplinary approach to planning, the course did not originate out of nor was it housed in any of the academic departments. After discussing academic rigor and the structuring of the experiential component, the committee readily agreed that such a course would be a valuable addition to the undergraduate educational experience. Additionally, the course seemed appropriate for and consistent with the goals of the general education curriculum, particularly in providing opportunities for personal growth and values development.

After establishing consensus on the viability of a public service course, it became necessary to define the scope and nature of the course. One of the first issues was to demonstrate how a proposed public service course would differ from existing courses in related disciplines such as Political Science, Government and Public Service, and Social Work which provided students with opportunities to work in community agencies as volunteers or as interns. The committee had to clarify the unique learning that would be expected to occur from the proposed course. The course was also intended to serve as a key basis for a college-community partnership to address important issues affecting the community and higher education. It became evident during the early stages of planning that any experiential course with academic credit would need to reflect academic rigor. The course description developed by the course planning committee ultimately reflected a course that would entail a 75 minute weekly seminar and a minimum of 50 clock hours in an appropriate agency placement.

The approval process had as its hallmark an attempt to be as inclusive as possible given the nature of the course. Prior to committee involvement, the Academic Vice President presented the proposal to the academic deans and secured their endorsement, with the understanding that an interdisciplinary committee would work out the logistics.

After the committee finalized the nature of the course and administrative details, the proposal was submitted to four key faculty committees for their consideration. The first review of the course was from the Committee on Undergraduate Instruction for determining whether or not the proposed course overlapped with any existing courses. This committee also recommended that the Arts and Sciences Curriculum Committee have an opportunity to react to the proposal, even though they had no authority to approve or disapprove given the interdisciplinary nature of the course.

The course proposal was presented to the Arts and Sciences Curriculum Committee, which recommended that students be required to have at least sophomore standing before enrolling in the course. This recommendation was incorporated into the course proposal. The General Education Committee was the next committee to review the course proposal and approved the inclusion of CVS 201 as an elective in the General Education Distribution Requirements. Academic Council gave final course approval for inclusion in the general education elective course offerings, allowing the course to be included in the college catalog effective Fall 1989.

The experiential and interdisciplinary nature of the course presents a number of administrative challenges. One of the major advantages and disadvantages for this course was that it originated in central administration versus an academic discipline. The planning committee had to mediate the initial faculty resistance to accepting a course conceived somewhere other than a typical department or discipline. A second major challenge was to determine who would teach the course. It was important to the committee that the course not be considered a pre-professional course. Likewise, it was important that the course be taught by a faculty member with broad appeal and a reputation for teaching excellence. A third challenge for the implementation of the course was the identification of and commitment from community agencies to participate in this new course offering. Questionnaires were mailed to over 15 community agencies soliciting their involvement. It was important to select agencies that were able and willing to accept student volunteers for meaningful volunteer experiences rather than simply to provide staff to engage in perfunctory activities. Community agency response was overwhelmingly positive.

Course Design and Implementation

As conceptualized, "CVS 201: Introduction to Community Volunteer Service" represents an effort to provide the student with a unique opportunity to examine citizenship and public service. As a course that both draws on a number of disciplines and also involves experiential components, the design of the course and it's implementation present the instructor with a number of challenges. Following a description of the course, the broader questions of course content, student recruitment, and student placement will be addressed.

Although initially taught by a professor of political science, the course is not intended to focus exclusively on any single discipline. The major purpose of the course is the encouraging of both critical thinking and practical experience with respect to the concepts of citizenship and social responsibility. Specific objectives include: (1) provision of a structured vehicle for the volunteeristic initiatives of students, (2) exposure of students to the role, value, and limits of volunteerism and public service in contemporary society, (3) provision of an interdisciplinary academic background to volunteerism, (4) an examination of the needs of society, particularly those of South Carolina, and (5) the examination of the myriad of national proposals for structured civic involvement.

The non-traditional and experiential nature of the class suggest that the character of the course is just as important as the content. In terms of content and basic class structure, students meet for weekly seminars in addition to their minimum of fifty clock hours of volunteer service during the semester. With assignments from books such as Robert Bellah's *Habits of the Heart* and Benjamin Barber's *Strong Democracy: Participatory Politics for a New Age* as well as a packet of readings, students examine a variety of topics designed to acquaint them with the dimensions of the pressing problems facing our society and the possibilities and problems associated with the volunteer response. These topics include among others "Civic Commitment in a Consumption Culture," "Profiles of Poverty," "Profiles of the Volunteer," "Citizenship and Community," and "The Paradox of Mandated Volunteerism." With each topic, there is an important question such as "Is caring necessarily paternalistic" to which the student responds and reflects with a lengthy journal entry. Classes are conducted to a considerable extent in a seminar fashion, and many discussions take place outside of the formal class setting.

While the course content is important, the nurturing of civic or moral skills presents the instructor with some rather unique pedagogical challenges. Recent literature reveals that the teaching of a "moral skill" should focus less on intellectual development and more on "the role of habit in moral behavior and of habit formation in moral training" (Gotz, 1989: 11). This necessitates that the instructor of such a course allow for student exploration of social problems and citizen response through service experiences rather than an exclusively academic presentation of the problems (Leege, 1984). Additionally and even more challenging is the necessity of a sensitivity and a willingness to help that is student generated rather than instructor generated. Service as well as seminar experiences which allow the student to integrate ideas, values, and actions are the overarching goals of the course.

Initial student recruitment efforts highlighted the non-traditional nature of the course and its use as general elective. While a disproportionate number of presently enrolled students are Arts and Sciences majors, the selection of faculty in the School of Education and the School of Business for future instruction of the course should broaden representation of the College. Recruitment efforts through faculty advisers yielded a healthy first enrollment. As students have developed a sense of ownership of the class, they have themselves created a number of strategies to recruit future course participants.

Given that Winthrop was one of the first recipients of a "Student Literacy Corps" grant from the U.S. Department of Education, students enrolled in CVS 201 were engaged in a number of literacy related projects. This not only facilitated the placement of students during our initial semester, but also contributed to a shared sensibility of the problem of adult illiteracy. All of the students spent a weekend becoming certified Laubauch Literacy Tutors. A number of students are serving as volunteer tutors through the York County Literacy Association working one-on-one with clients reading below the fifth-grade levels. Other students are involved with programs through Carolina Community Action, a private, non-profit community service agency which serves as an umbrella for a number of state, federal, and privately funded activities. Students in CVS 201 are involved in two such activities, Head Start and the Job Training Partnership Act. Students are also tutoring with an national agency, "7001" which prepares out of school youth for the GED examination.

Although the literacy emphasis provided a unified focus for the course and placement, it also presented a number of problems. Given that literacy work requires sustained tutoring and the formation of a bond between tutor and learner, several agencies expressed an initial reluctance to use the college student as tutor. Further doubts were expressed concerning the compatibility of the adult learner and the college student. While this was especially frustrating for some of the students in the course, it also served to illustrate the complex nature of volunteer service. Fortunately, the success of the first college students as tutors to adult learners dispelled the bias on the part of the community agencies. The placement process also illustrated to the student the lack of any significant coordination of agencies involved in literacy work.

While direct service is an essential component of the course, the students are also involved with projects such as a county-wide literacy needs survey, a Literacy Awareness Week, and a student handbook of volunteer opportunities in the area. On the state-wide and local levels, the demographic profile of South Carolina reveals significant percentages of the population living below the poverty level and lacking in educational training and basic literacy skills. At present, nearly fifty percent of the state's adult population has not obtained a high school diploma. Facing these problems, the existing community agencies will benefit from the involvement of cadres of college students in volunteer service.

This course also builds upon a Winthrop tradition of community service. Significant numbers of Winthrop College students are involved in voluntary service activities each year. Winthrop's commitment to incorporating service learning as an integral part of the undergraduate experience will allow for greater centralization of these service opportunities and therefore greater student access and awareness of the greater college community.

Evaluation and Impact

The nature of this course necessitates a multimethod, multitrait approach to evaluation. The evaluation model being developed and implemented for the course at Winthrop College includes such an approach as well as an emphasis on the assessment of the service learning and personal development of students that will hopefully occur. Given that the course was only recently offered for the first time, the evaluation and assessment procedures described in the remaining sections of this paper have not been fully implemented and are expected to be further refined.

Formative aspects of the evaluation model consist of methods to assure efficient and effective implementation of the course. Faculty meet regularly to discuss accomplishments and determine the need for modifications of the initial implementation model. Ongoing feedback from students and community agency personnel are crucial to this process. Written and oral progress reports are given to the College's Vice President for Academic Affairs.

Quantitative methods are used to evaluate the desirability of the course and to assist in the administrative planning for future section offerings. Data being collected include the number of students seeking registration in the course and those actually enrolled; student attrition/ retention rates for the course; and the number of students placed in community agencies.

The course and its various objectives and components are reviewed from the perspective of students and community agency personnel through interviews/survey instruments administered at the end of each semester. A student evaluation of course form was created to address both the academic and experiential approaches employed. Items on this instrument address specific course objectives, strengths and weaknesses of course components, and a self-evaluation of learning and development. A formal, written evaluation of student performance and course effectiveness by agency supervisors, where applicable, provides an external perspective. Such information is considered in assigning course grades and, more importantly, can be shared with students in a manner that may enhance future community service and personal performance.

Student learning and development within the course are being assessed through the weekly journal of response and reflections on readings and volunteer experiences, instructor perceptions of the nature and content of class discussions, and a final exam consisting of a written essay and oral presentation/interview. The results of these methods are also reviewed by a faculty member not involved in teaching the course so as to provide "externality" to the assessment process.

Most faculty involved in developing and/or implementing college-community service projects would likely agree with the authors that the importance of such projects lie substantially in their potential impact on student attitudes, values, and future behavior. Research in social psychology does support the view that more experiential approaches to learning, involving repeated direct contact with an "attitude object" have the potential to result in stronger attitudes (Frazio & Zanna, 1981) and more favorable reactions (Baron & Byrne, 1984). Although the impact of the college experience in general on civic involvement values has been studied (Pascarella, Ethington, & Smart, 1988), most approaches to assessing the impact on student values of a course or program that includes experiential or internship components rely on descriptive analysis of student logs or similar subjective methods (e.g. Wertzdorff & Hutchings, 1988).

The evaluation model for community service course at Winthrop will go beyond traditional methods by including a quasi experimental research design to determine the possible impact of the course on student attitudes, values, and intended behavior. Pre-post measurement of these variables will occur among those enrolled in the course as well as in a control group of students enrolled in a nonexperiential course with a similar student enrollment. A multi-trait self-report instrument has been developed specifically for this purpose.

The instrument includes sets of items designed to measure the following characteristics: self-satisfaction, attitudes toward community service agencies and charities, self-efficacy related to community service, behavioral intentions regarding future community service, and altruism. Background information on socioeconomic status, religious orientation, and family history of volunteerism/community service is also solicited. The altruism items were taken from The Values Scale by Nevill and Super (1989) in order to provide a norm-referenced comparison with a national sample of university students and adults.

Self-efficacy and behavioral intentions were selected as important areas to study because they would be expected to predict future behavior more accurately than would attitudes or values. Self-efficacy beliefs, or people's beliefs about their capabilities to act and exercise control over events that affect their lives, function as important determinants of human motivation, affect and action (Bandura, 1989). Behavioral intentions, or specific stated intentions to act in certain ways, have also been found to give accurate predictions of future behavior (Fishbein & Azjen, 1975).

Finally, an attempt will be made to gather information on the future community service participation of course graduates through a student/alumni career tracking system already in place. It is ultimately hoped that the academic and experiential approaches included in this course will not only result in student learning and personal development, but a predisposition to action that serves the needs of individuals and communities in the future.

References

Bandura, A. "Human Agency in Social Cognitive Theory" American Psychologist, Vol. 44 (September, 1989).

Baron, R.A. & Byrne, D. Social Psychology. Newton, MA: Allyn and Bacon, 1984.

Fishbein, M. & Azjen, I. Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research. Reading, MA Addison-Wesley, 1975.

Frazio, R.H. & Zanner, M.P. "Direct Experience and Attitude-Behavior Consistency." Advances in Experimental Social Psychology, Vol 14, edited by L. Berkowitz, pp. 35-52, New York: Academic Press, 1981.

Gotz, I. L. "Is There a Moral Skill?" Educational Theory Vol. 39 (Winter 1989), 11-16.

Leege, D. C. "Political Science and General Education: Bridging Metaphysics, Theory, and Practice" News for Teachers of Political Science. (Winter, 1984, No. 40) 1-4.

Nevill, D.D. & Super, D.E. The Values Scale: Theory, Application and Research. 2nd ed. Palo Alto, Consulting Psychologists Press, 1989.

Pascarella, E.T., Ethington, C.A., & Smart, J.C. "The Influence of College on Humanitarian/Civic Involvement Values." Journal of Higher Education. Vol. 59 (July/August, 1988), 412-437.

Tocqueville, A. Democracy in America. Volume II. New York: Vintage Books, 1945.

Wertzdorff, A. & Hutchings, P. "An Integrating Seminar: Bringing Knowledge and Experience Together." Knowing and Doing: Learning Through Experience, edited by P. Hutchings and A. Wertzdorff, pp. 64-75, San Francisco: Josey-Bass, 1988.

INTEGRATING THE LIBERAL ARTS:
AN EMPIRE STATE COLLEGE APPROACH

Jacqueline Rose

Introduction

[Abstract: The paper describes a team taught, integrated, interdisciplinary seminar at Empire State College. Three separate courses are proposed: one examining the period from the Greeks to the Enlightenment; one covering the Nineteenth Century; one on the Twentieth Century. The overall goal of each is to show how literature, science, philosophy, and political institutions interacted and shaped each other over time. Of crucial importance is the focus on how the intellectual paradigms of the times set the boundaries of knowledge.]

> "You are what you know. Fifteenth-century Europeans 'knew' that the sky was made of closed concentric crystal spheres, rotating around a central earth and carrying the stars and planets. That 'knowledge' structured everything they did and thought, because it told them the truth. Then Galileo's telescope changed the truth." (Burke)

As is true at many colleges today, Empire State College students often want to specialize quite heavily at the undergraduate level. While the faculty urge breadth and integration, the students, reacting to pressure from employers and accepting the growing popularized image of college as training rather than education, frequently opt to take the minimum nonmajor studies. Faculty exhortations are not enough to overcome these influences; in Burke's phrasing, students are what they know, and what they "know" is specialization--a concept reinforced at most colleges and universities as well, unfortunately.

For previous generations of college students, the value of a broad liberal arts education was questioned less than it is now; an integrated knowledge of science, humanities, and social sciences was considered the definition of education. Now, with education seen as training in a specialized field, with "broadening" curricular requirements greatly reduced, and faculty members themselves often highly focused, most students not only do not learn in an integrated way, they never even learn the value of doing so.

Jacqueline Rose, Ph.D., Assistant Professor, Empire State College-SUNY, 564 Franklin Street, Buffalo, NY 14202-1182

374

What Can be Done?

Institutional Responses:

Academia has responded in several ways thus far, as we are all aware. A variety of institutions have developed anything from general education requirements to interdisciplinary studies to integrated curriculum. Some have been doing this for years, some only beginning, but all have encountered serious resistance in one form or another; it's not necessary to elaborate here on the varieties of departmental conflicts, faculty resistance, and student opposition, nor on the scarcity of team taught courses that integrate social sciences and humanities with the sciences. (Kesey) The focus of this paper is what happens once an integrated program of some sort is established--what problems may be inherent in such an approach?

Empire State's Experience:

Over the past six or seven years one center of Empire State College has presented a team taught interdisciplinary seminar. There have been various manifestations of this seminar, but each has been ultimately less than successful from the faculty's point of view. Although the students enjoyed the course and indicated that they had gained a lot from it, their research papers (which were to be interdisciplinary analyses of their topic) generally indicated that they still approached issues in a disciplinary manner. The seminars were revised over the years trying to locate the source of the problem; readings were changed, topics were altered, more examples of interdisciplinary studies were provided.

But the results basically remained the same; those students who, prior to the course, thought strictly in a disciplinary manner, still thought in a disciplinary way.

A New Model:

Finally four faculty (Peter Murphy, Nick Cushner, Ed Kowal and myself) decided to completely rethink the course. It had appeared that what students in previous seminars had concluded from the presentation was simply that each discipline had its own way of examining a problem, that each looked at a topic from its own perspective and based on its own needs, interests and motivations. What the students had not learned was that each, by being incomplete, was in some sense also therefore incorrect. Yet without this as a fundamental outlook, the search for "unity through multiplicity" (Adams) or what Bateson called "the pattern which connects", cannot even begin.

Obviously the inherent value of interdisciplinary analysis had to be emphasized more strongly. It had to become clear to students that an integrated analysis was not just an examination of a variety of different approaches, but an approach in its own right which was different from and better than the more traditional disciplinary approach.

That this is true may not seem like earthshaking news to us, in fact, may seem obvious, and inherent in the understanding of integrated thinking, but it clearly was not so obvious to the students. The problem was how to make this apparent.

After much discussion, we decided to approach this understanding via an overt examination of intellectual paradigms. We made the issue of "you are what you know" an integral part of the seminar's approach.

To approach this redesign in a systematic way, several Empire State faculty, representing a broad spectrum of fields--science, humanities, history, and social sciences--have, over the last two years, worked on the design of a three part, integrated study which examines knowledge of different time periods from the perspective of the then extant world view. The first part examines the Greeks, the Middle Ages, and the Enlightenment; the second covers the nineteenth century; and the final part will deal with the twentieth century. Each study examines science, literature, art, and philosophy; how they influenced each other; and how knowledge in each field was shaped by the world view.

We decided on this approach, rather than a topic approach (for example, the environment), in order to avoid an area in which the students would have "disciplinary ideas" already formed. It also allowed, obviously, easy access to discussion of the importance of the role of historical context in determining ways of thinking.

Empire State Peculiarities:

The design of this three part study was also determined, in part, by the nature of the College and its students. Empire State is a nontraditional college. Almost all students are adult learners (the average age of students is about forty), where learning is primarily done on an independent study basis (though we opted to present this course as a study group or seminar, to allow for more contact time, the presentation of visual materials, and the participation of more than one faculty member, and thus more fields of study). Empire State has no departments as such; thus all of the interdepartmental problems often associated with interdisciplinary studies courses were not at issue, and the opportunities for frequent meetings on design of the studies were readily available. Since our students are mature learners, most of whom have had previous college experience, we were able to assume a basic familiarity with--though of course no deep knowledge in--many of the topics presented.

The "down side" of Empire State's structure for this particular course is the restriction of contact time. The traditional forty-five hours has to be reduced to about twenty hours, which means that much of the information and ideas we want to communicate has to be done via readings alone. Since much of the twenty hours we have available must be devoted to visual representation of representative art and architecture, some in-depth analysis by faculty of the readings, and group questions and discussions, the time left for examining the world views and the interactive influences of disciplines is short. However, since these last two topics are crucial to understanding and organizing the information in the readings, we opted to write a study guide for each of the courses.

Study Guides:

These study guides, one of which is finished except for final draft polishing, are designed to accomplish several objectives: 1) present an overview of the time period(s) examined; that is, present an outline of the major events, scientific discoveries, and philosophical ideas, and outline the world view(s) in which those events, ideas, and discoveries were imbedded; 2) present several short case studies, designed to exemplify an integrated analysis looking at a specific topic in terms of its interactions with other fields. For example, a case study of the Reformation looks at how Luther's questioning grew out of specific Church practices of the time, but ultimately influenced thinking about the nature of religious thought and the possibility of thinking unhindered by any institutional restraints, not to mention the significant shifts in political and societal power which grew out of such thinking; 3) discuss the assigned readings--providing the student with some historical context, a brief summary of the reading, and suggesting integrative ideas to keep in mind while doing the reading; and 4) present a discussion of integrated analysis and interdisciplinary studies. Obviously the entire study and presentation is integrated and interdisciplinary, and thus shows by example the benefits the approach brings to study, but the fourth section of the study guide overtly discusses the issue, giving examples of how insights from one discipline altered thinking in another--Malthus' influence on Darwin, for example--and how reductionism and specialization often leads to problems--as when the West introduces technological changes to Third World nations without thinking about their potential economic or social impact on the culture.

Another value of the study guide is that it draws the integrative connections between events, which the readings alone could not do. Unfortunately, there are few, if any, integrated texts available for use, especially given this particular structure of the courses. Obviously most texts are disciplinary, and even the interdisciplinary ones (humanities texts, for instance) usually greatly stress one area of study with others mentioned only briefly. The study guide presents the opportunity to keep reiterating integrative analysis and suggesting integrative questions for the students to consider.

Further, the study guide, on computer disk, can easily be modified if faculty decide to alter readings. This flexibility of the guide also means that as different faculty members choose to become involved in presenting the course, they can redesign it easily to fit their own preferences or fields of expertise.

One of the goals in designing the series of courses was to get more faculty interested and involved in teaching integrated studies. Since it is frequently difficult to interest faculty in this kind of project in the first place, we felt it crucial to have a course already in place, but which is easily modified; thus new faculty have the option of teaching it as is, or adapting it to their own styles without having to think through the whole plan or rewrite the entire guide. For all of these reasons, we believe that the use of a study guide is crucial to any college presentation of such a course, even those which have more contact time with students.

The First Presentation:

In the Fall of 1989 the first of these three courses was presented, covering the Greeks to the Enlightenment. The course itself was separated into eight meetings of about two and a half hours length, with meetings scheduled once a week. This required students to do a fair amount of reading in a short time, since the reading list consisted of the study guide (which was fifty pages long); Sophocles' Oedipus Rex; Powers' Medieval People; Dante's Inferno; Bronowski's The Western Intellectual Tradition; Westfall's The Construction of Modern Science; Voltaire's Candide; and Nash's Red, White and Black.

We selected these particular readings for a variety of reasons. First of all, they have different foci: science, literature, philosophy, history. Each also is a good example of the mind set or dominant way of thinking of the time period. Further, Bronowski's book itself examines the changes in thinking that coincide with political, literary, and scientific changes.

The first half of each meeting was used for faculty presentations on the material. Here a faculty member either provided historical context, explained any technical or other difficult aspect of the reading, and/or presented slides showing the art and architecture of the time period. The last half of the class was spent on group discussion, which included both student and faculty participation. Before the group broke for the night, faculty gave a very short presentation on the next assigned reading--ideas to keep in mind, questions to be considered, etc.

Each student was expected to participate in group discussions, to hand in written answers to questions on each reading, and to write an interdisciplinary, integrative research paper on a topic of their choice. Since there were four faculty members, representing four different fields, each student worked on their research paper under the guidance of the faculty person in the field of their study. As the faculty member met with students individually to discuss their projects, s/he helped the student think through various aspects of the topic which needed to be considered to make it an integrated analysis.

Assessment:

After all the scheduled meetings were completed, there was one extra meeting in which the students assessed the value of the course, and tendered suggestions for improvements. They also completed anonymous questionnaires evaluating the course and its presentation. These suggestions, in addition to faculty evaluations will be used to modify the course slightly (The Westfall reading, for example, will definitely be substituted. Students and faculty found it more confusing than illuminating).

Evaluations were consistently positive both in terms of structure and presentation. More importantly, students unanimously agreed that the course had changed the way they think about things. Not only was the importance and usefulness of integrated thinking clear to them, they were enthusiastic about taking more courses presented in an integrated manner. Further, their research papers indicated a clear ability to do work in an integrated manner. For example, one paper on Greek and Medieval architecture set the examination in the framework of differences in religion, philosophy, cultural values, historical interpretation, technology, and societal structure.

Future Directions:

Given the success of this first course, planning of the subsequent courses is now underway, utilizing the same basic format in dealing with the other two time periods. Obviously these latter two courses will be different from the first since they each cover such a shorter time span. The nineteenth century study will examine the change in world view which occurred with the new discoveries in biology and geology. The study of the Twentieth Century will possibly be more difficult since it will deal with the current paradigm--which is always harder to examine objectively. So, we plan for this course to use Kuhn's The Structure of Scientific Revolutions as the first reading, in an attempt to help students address this difficulty. We may well use Habits of the Heart to address this issue as well, since it focuses on non-science issues, and would thus give the students yet another way of looking at the issue.

References

Adams, Henry. *The Education of Henry Adams*. New York: Literary Classics of the United States, 1983.

Bateson, Gregory. *Mind and Nature: A Necessary Unity*. New York: Bantam Books, 1980.

Bellah, Robert, et al. *Habits of the Heart: Individualism & Commitment in American Life*. New York: Harper Row, 1986.

Burke, James. *The Day the Universe Changed*, preface. Boston: Little, Brown and Company, 1985.

Kesey, Robert. "Transformations in Disciplinary Knowledge Assumptions and Their Implications for Reforming the Undergraduate Curriculum". Unpublished Paper.

COMPUTER IMPLEMENTATION OF CRITICAL THINKING IN THE HISTORY OF PHILOSOPHY

George Teschner
Frank McClusky

Introduction

What will be described in the following article is the design and rationale behind a computer program that is being used to teach a two semester History of Philosophy sequence.

The course is listed as a Computer Assisted Tutorial with the acronym CAT. Registration News describes it as a writing intensive tutorial without regularly scheduled classes. Although the courseware is self-explanatory, one meeting is listed during the first week of the semester for demonstrating the software and teaching some computer basics to those who have never used a computer.

During a fourteen week semester the student is given a 5 1/4 inch floppy disk every two weeks. Each disk contains the assigned text with a commentary, a battery of test question, files containing a detailed syllabus and instructions on using the courseware.

The texts consist of short selections of no more than eight single spaced pages. They are contained on the disk as ascii files and accessible to the student either as a printed hard copy or by reading the text on the monitor screen in a utility called 'Commentator'.

Annotated Text

Commentator enables the student to get interpretations of most passages in the text by first pressing the F5 function key, highlighting the passage, and then pressing the F6 function key. A window is displayed on the screen that overlays the text and gives a commentary on the string of words that was selected by the student. Once the comment is read, pressing the F10 function key removes the comment from the screen and returns the student to the text. The string of words that is selected passes through two parsers. The parsers break the string into a list of words and processes it according to its logical syntax. The first parser scans the sentence for inference indicators such as 'because', 'therefore', 'in conclusion', 'it follows that', etc. If these words are found in the highlighted passage, the text is overlaid with a window containing a message showing the likelihood, and probable direction, of an argument.

George Teschner, Christopher Newport College, Newport News, Virginia.
Frank McClusky, Mercy College, Dobbs-Ferry, New York.

If the student for instance highlights the passage from Locke's Essay Concerning Human Understanding:

> ... It is therefore the actual receiving of ideas from without that gives us notice of the existence of other things...

The first screen displays contains the message:

```
A logical argument is indicated in the
passage with the reason preceding the
conclusion.

Press ESC KEY or F10 for further commentary.
```

The second parser compares the highlighted or entered passages with a database of formulae. If a match is found, then the appropriate comment is sent to the screen.

In the case of the above quoted passage the following message is seen:

```
Locke argues that it is only through
sensation that we know that objects external
to the mind exist, although we may not know
the manner in which these objects produce
the sensations.
```

Any screen, whether text or commentary, can easily be printed out as a hardcopy by pressing the Shift and PrtSc keys.

Since the database is triggered by logical combinations of key words and not the location of the highlighted passage in the text, a specific combination of key words, no matter where they occur in the text, can invoke the commentary that has been written for them. However, not every highlighted passage receives a commentary. In cases where there is no commentary the following message is sent to the screen:

```
No comment available for the passage that
you have highlighted.

HINTS FOR TEXT ANALYSIS:

1.  Highlight Key words and phrases.
2.  Consider what words should be INCLUDED
    or EXCLUDED.
3.  EXPAND or RESTRICT highlighting
    accordingly.
```

The instructions represent certain pedagogical strategies in designing the commentator. The assumption is that by highlighting passages the student, through trial and error, is reinforced for developing successful techniques of textual analysis. The student is encouraged to focus upon relevant semantic structures and combinations of terms that constitute what would otherwise be called a "concept" or "idea". For the purpose of the design of Commentator a concept or an idea is understood as a cluster or constellation of words that mutually influence the meaning of one another. Each cluster is entered into the database as a key word formula.

Commentator Database

The database that is used by Commentator is written by the instructor. In the case of the quoted passage from Locke's *Essay Concerning Human Understanding* the following formula was used:

(actual & receiving & ideas) ^ (manner & produced)
^(quality & accident)

Here the ampersand signifies the logical 'and' and the carat signifies the exclusive 'or'. Paraphrasing this database record into natural language it states that,

> if the words 'actual' and 'receiving' and 'ideas' or the words 'manner' and 'produced' or 'quality' and 'accident' are found in the highlighted passage, then write to the screen the comment that, "Locke argues that it is only through sensation that we know that objects external to the mind do exist although we may not know the manner in which they produce the sensation."

The text constitutes a semantic micro-world outside of which the database entry could easily become inappropriate. Since the texts are relatively small, this does not create a significant problem. The instructor, in creating the database, can restrict the passages that invoke the commentary by increasing the number of conjuncts or by adding to the formula key words connected to the rest of the formula by the operator "and not". For instance, the formula (actual & receiving & ideas) would be more restrictive than (actual & ideas). The formula ((actual & receiving) ^ (manner & produced) would be the less restrictive and ((actual & receiving & ideas) and not(produced)) would be the more restrictive. Increasing the interpretative scope of the commentator to a larger text can be achieved by creating fields located in different databases whose signatures could be again determined by the occurrence of a combination of key words. In this way the commentator could distinguish between texts by Plato, Aristotle, Kant, Hume, etc. and within these texts link key word combinations to appropriate commentaries on different passages. Even though the search through an individual database is linear and therefore time intensive, multiple databases can be used and information retrieved by moving along the nodes and branches of tree structured indexes. For an eight page text, with a database of comments of 40 Kilobytes, on a machine running at 10 megahertz, the comment screen is displayed instantaneously.

The commentator is essentially a hypertext design, but differs from most hypertext programs in that it is less deterministic. The link anchors are not hardtyped into the text. The link ends, or what in this program are the comments, are activated by logical syntax of clusters of key words. These clusters could occur anywhere in the text. In preparation for constructing the database for Commentator, a word count is made on the text which gives information on the number of times a word is used, and the occurrence of uncommon long word sequences. This provides some insight into what word clusters are to be selected for triggering the commentaries.

The student most often uses the commentator after having decided what questions to answer from the essay questions that the disk includes. Once the section that is applicable to answering the question is found, the student then uses the commentator to analyze the relevant passages.

Critical Thinking

The texts that are selected are dense with argumentation and the questions that the students answer in their essays invariably ask for the reasons or conclusions of arguments found in the text. In each of the seven essays that the student is required to write during the semester, there must be a statement of the ARGUMENT found in the text, an OBJECTION to the argument, and a REPLY to the objection. Each essay repeats this format. The student is also required to include in the essay instances of one of the five argument forms: simple, serial, divergent, convergent, and linked. By the end of the semester the student is combining these different argument forms into complex arguments. There is a term paper handed in at the end of the semester which must demonstrate these logical skills.

The course is designed to make the student an active learner. The objective is to shift (author)ity from the text and the professor to the student. The reading selections are chosen with this goal in mind. The entirety of a text is treated as a structure in which the whole, to some significant degree, is contained in the excerpted part. Through the application of proper techniques of analysis, an accurate impression of the complete work can be obtained from extrapolating a selection. The techniques used are argument analysis and paraphrasing. Since a large portion of any philosophical text consists in restating and developing arguments, these techniques serve well in enabling the learner to achieve actively what has been traditionally acquired more passively.

Testing

In addition to the Commentator, each disk contains a tutorial which presents the student with a series of 30-40 questions. The program can contain within the same database true-false questions, multiple-choice questions with up to four alternatives, and fill-in statements. The questions in the tutorial, as in the essay questions, request a reason for a stated conclusion or a conclusion for a stated reason. The questions are written in such a way as to require the student to make subtle distinctions between possible answers. The disk records the answers, the amount of time spent on each question, and the ratio of correct to incorrect answers. The program has branching capabilities so that the next question in the series is different depending upon whether the earlier question was answered correctly or incorrectly.

The tutorial was designed to exploit the capability of the computer to make instruction individualized and interactive. This is accomplished in two ways. First, by branching the order of questions as a function of correct or incorrect answers, the sequence of questions is different for different students. Secondly, by providing explanations for questions that were answered incorrectly, the program responds differently to different answers. The questions can be randomized or presented in an order which follows the order of the text. The tutorial is used as both a testing and teaching instrument. Randomizing the questions is used when the emphasis is upon testing, and sequencing is used when the stress is upon teaching the structure and organization of the text.

In building the database of questions, the instructor creates the main trunk by entering each question with an integer and then branching off each question by adding decimal places to the number. If the student, for instance, answers a question with a record number of 2 correctly, then the program will present the question with the next highest integer. If the question is answered incorrectly, then the program looks for a number between 2.1 and 2.9. If no record number is found in that range, the question with the next highest integer is displayed. If a question that has a record number in a range between 2.1 and 2.9 is found and answered incorrectly then the program looks for a question with a number between 2.11 and 2.9. The program has the capacity of sequencing questions to a depth of ten decimal places. The ten levels corresponding to the ten decimal places can be used to represent degrees of difficulty and serve as a means of classifying and sorting types of questions.

Division of Labor Between Man and Machine

The computerization of the History of Philosophy was motivated by the view that students are best served when they are provided with direct and immediate feedback in their writing projects through face to face meetings with the instructor. A guiding consideration in the design of the computerized tutorial was distinguishing what material can be presented by the computer and what was best left to the human being. The decision was to allow the job of the interpretation and explanation of texts to be largely taken over by the computer. The comments in the database for the commentator and the tutor are cross referenced. These together with the study questions constitute a system of questions and commentary designed to encourage detailed textual analysis and interpretation. Contact between student and teacher is a condition for receiving a grade in the course. The student is required to attend at least five one-half hour tutorials. During the tutorial, the student and teacher discuss and analyze the essays line by line. The tutorials are one-on-one meetings and the student is required to space these meetings during the semester so that essays can reflect the feedback that the student is receiving during the tutorials. The emphasis of these meetings is on improving the quality of the argumentative writing guided by the historically noteworthy examples of argumentation found in the selections. During the seminars, where a maximum of five students attend, the exchange between the students is moderated by the same rules that govern the writing of the essays, namely the sequence of argument, objection and reply.

When the student returns the disk, information is recorded on the amount of time the student spent on each question and what questions were answered correctly and incorrectly. The database containing this information is then used to provide information of the performance of the class as a whole and on each student individually. During a tutorial meeting, this information is available either on screen or hardcopy and used for consolation. The program not only provides statistical information but also provides diagnostic clues to the most likely source of difficulty.

Diagnostics

For diagnosis the program takes the questions which were answered incorrectly and converts the texts of the questions into a single string. This string is then analyzed by counting the frequency of the occurrence of unique words, excluding a list of common words. The resulting list then can be used as a basis for analyzing the student's comprehension of the text. What guides the design of the diagnostic portion of the program is the principle that the cause of incorrectly answered questions is a lack of awareness of the appropriate semantic practices governing the use of a word, phrase, or word cluster.

The questions for the tutorial are written with the diagnostic program in mind. Since the words and phrases in these questions will serve as a database for consultation, the questions contain words that are unique to the text and central to its network of semantic relations. Locke, for instance, uses the term 'certainty' in the context of sentences asserting knowledge of the existence of an eternal being and in sentences that affirm knowledge of objects external to the mind. Locke is willing to use the same word to describe the quality of the knowledge of the existence of God and the knowledge of the existence of objects of sense. The word 'certainty' is used equivocally. Its meaning changes near clusters of theological terms in contrast to clusters that characterize the language of sense perception. Questions are written to test this ambiguity in the meaning of the word 'certainty'. If the word 'certainty' turns up on the word list created by the diagnostic program then it can be used as a topic of discussion during a tutorial or seminar. The diagnostic program can either analyze all the questions that a particular student answered wrong or all the questions which the class as a whole answered incorrectly. One is used during the one-on-one tutorial, the other during the seminars.

Using unique terms in incorrectly answered questions is the basis for locating sources of difficulty. In writing the databases for the program it has proved helpful to adopt a linguistic perspective where the focus of attention is on which words are being "mentioned". During the discussions of the texts with the students, attention turns to "use" and what the words "say". While writing the database it is helpful to be aware, for instance, of the text as "sense perception talk" and "theological talk" while in discussion one speaks "of" sense perception and "about" God. This double awareness of the text is the natural result of using the machine. Programming requires an awareness of the extensional relationships between words such as word lengths, word sequences and word counts.

Advantages of Computer Assisted Instruction

The quality of the computer assisted tutorial is capable of significant incremental improvement from semester to semester. The commentary database can be enlarged and made more discriminating in its comments. The branching of the battery of questions and responses can be deepened by the multilevel stacking of questions.

The amount of improvement of the traditional classroom is relatively small by comparison. Although the instructor can increase his or her knowledge in a particular area, this does not necessarily translate into an improvement in classroom delivery. In fact, the subtleties in the mastery of subject matter are likely lost in lower level courses and may even prove counter-productive. For the human instructor, proficiency in the subject matter often stands in conflict with another variable to good teaching ,namely, enthusiasm. If the classroom is going to be a place of mutual discovery and learning for the student and instructor alike, then it is necessary to choose new and untried material over that which has worked successfully in the past. Old lecture notes and research are usually consigned to the filing cabinet and forgotten. With computer based instruction, however, old material remains alive in the database of the program working and interacting with the student long after the immediate interests of the instructor have turned elsewhere. Disks, for instance, that have been used in the History of Philosophy have already made their way into upper level courses. The disks are distributed to students to prepare them for upcoming discussions. Information from returned disks is processed in minutes and serves as a basis for grading and/or diagnosing comprehension of the material. Lecture and discussion are geared accordingly.

Upcoming Features

A teaching technique that readily lends itself to computer implementation is PARAPHRASING. This already plays an important role in writing the comments and questions. Philosophy has an impact on the student's life and thought when it can be paraphrased by the student into a language that is natural, familiar and useful on a day to day basis. A new module is being designed that will provide paraphrasing of highlighted passages that will be accessible from within Commentator. The paraphraser will be limited to terminology unique to the text, excluding common words, and operate from a database consisting of lists of synonyms.

The new version of the program will also provide a simple WORD PROCESSOR for writing essays. When a document is being written, function keys will allow access to other text files on the disk. The student will be able to do a search of all the text selections and import quotations directly into writing assignments.

Since a logical format is encouraged in writing essays, a STYLE CHECKER will be included with the software. Argument indicators such as 'therefore', 'in reply', 'an objection to', etc., clarify the logical structure of the essay. In addition to the terms of logical analysis, answers to specific questions the use of certain words, their cognates and synonyms. The style checker can search the essays for these terms. The frequency, occurrence, and placement of words and phrases can be processed by the program and an analysis provided of the essay with suggestions and comments before the essay has been submitted. Much of the time spent between the instructor and the student in analyzing the essays, particularly in the early part of the course, can be performed by a program of such design.

The Electronic Text and Teaching Philosophy

The simplest of commercially available word processors can do search and replace. These are powerful research tools when coupled with the availability of traditional philosophy texts on disks. Word counts of key words and long-word sequences give insight into logical and stylistic structures. Cross-referencing key word sequences across a wide range of texts by different authors reveals connections that are invisible to older research techniques. The computer can provide much of what was traditionally supplied by the instructor in a manner that allows the student to be a designer of instructional courseware as well as a guide and consultant in the learning process. In such an environment, the traditional text becomes a database of terminology and semantic practices, that serves the original and creative use of the language of philosophy.

388

CAN STUDENTS DEFINE THEIR OWN WAYS OF KNOWING

Carlson Yost

Can students define their own ways of knowing? For those of you who need a thesis at this point, my answer is: yes, no, probably not, perhaps, I really don't think so, I certainly hope so.

I teach at Shawnee State University in Portsmouth, Ohio. Three years ago the state decided to transform Shawnee from a two-year community college into a four-year university that also maintained two-year programs. We have about 3000 students, all but 50-100 commuters, with an average age of 27. Portsmouth was formerly a thriving industrial river town but has lost half of its population in the last thirty years.

A majority of the university community decided that an interdisciplinary set of courses needed to be designed before the university switched from two-year status to four-year status. A set of thirteen core courses covering about one-fourth of each student's program was mandated. I am interested here in the three course sequence known as Civilization and Literature.

> The first course in this series, Western Culture, would be based on an historical framework but would integrate the impact of ideas, influence of form, and notions of taste and beauty. The major goal would be to help students understand how our own culture has been informed, and to some extent formed, by our antecedents in Western culture. The second course, American Culture, would follow the same format as the first course with special attention to the impact of political, social and economic ideas. The third course in the series would have as its goal instilling an appreciation of non-Western influences on our culture, of the multicultural nature of modern society, of the global interdependence which marks the modern world and non-Western cultures which we need to understand. (It may be that this should not be a single course, but an opportunity for students to select one from a number of courses which meet this goal, e.g., courses in world politics, comparative religion, etc.). (Shawnee State, p. 3)

Carlson Yost, Department of English, Shawnee State University, Portsmouth, OH 45662

Each course in this series will utilize an historical frame, but the primary vehicle for the presentation of the material will be various literary works. Furthermore, each course will also include the role of the creative and performing arts in the cultures being studied.

The goals and content of this core seem to agree with my assessment of the educational situation. Somehow, through a complex tangle of events and influences, many students and even some teachers have come to believe three things that are very destructive of the learning process:

1. Reading is a purely mechanical process;

2. Writing is a purely mechanical process; and

3. Reading and writing are two separate subjects and need not be connected.

Students believe that they will improve their reading only if they learn to memorize better; they believe that they will improve their writing only if they reduce their mechanical errors; they believe that it is unfair for teachers to expect them to write about what they read.

The longer students believe these things the harder it becomes for them to recover. The memorizing reader sees all texts as two-dimensional collections of barely related facts to be memorized. Reading is an activity designed only to pass tests. The mechanical writer sees writing as activity in which one puts down a certain number of words while hoping to avoid committing any of the mysterious errors that English teachers see. As students try to perfect these techniques, the gulf between their reading and their writing gets wider and wider.

I try to help students put their reading and their writing skills back together. I ask them to write about what they read without first telling them what they should have seen. Some of them honestly but mistakenly think that I am unfairly withholding "the answers" from them. I tell them that they cannot make sense of my explanation unless they have first made an attempt to understand the material themselves. Most students see this point quite quickly, and the work of reading and writing gets easier for them because it begins to make sense. Some students understand but have been memorizers and "theme writers" so long that beginning to go the right way gives them discomfort. A handful of students don't want to change. The mirages of the perfectly memorized book and the error-free theme are too enticing.

These students are mistaking the simplicity and clarity of their idea about reading and writing with the truth about those processes. Reading and writing are actually very complex, interrelated skills that are also interrelated with the other skills, also complex, of listening, talking, and thinking. Any student who accepts the complex, interrelated nature of

390

these skills has begun the path to improving them. Any student who demands that teachers conform to a simplistic and separable model of the skills is thwarting the development of all language-related skills.

Because mechanical models of education have been accepted, students no longer believe that they are responsible for their own ways of knowing. My main goal in my classes is to get students to accept that responsibility.

?

I am convinced that the first step in this process must be to get students to ask questions. Humans are question-asking creatures. Education ought to be an aid to answering questions. Students believe that they are getting educated in order to learn to read, write, think, work... These activities do not work in the abstract. They should instead be working on the questions:

What can I learn to read?
What can I write about?
What can I think about?
What work should I do?

In other words, the first questions we need to ask are about our own nature and the nature of our own knowing. These are difficult questions, that is part of the reason our schools are ignoring them. As Wayne Booth says, "We know before we start that our thought is doomed to incompleteness and error and downright chanciness." He goes on to point out that the fundamental activity of human thought is speculation, and says, "A college education, surely, should throw every student into a regular torrent of speculation." (281)

Unfortunately for us, and for students, any speculations are considered "bull" by students, and good teachers don't ask students to "bull." I have an essay, "The Main Thing You Learn In College", that I give students to write about. It has been six years since any students disagreed with the thesis. Students believe that exams are supposed to measure only what you know. The widespread proliferation of Scranton tests makes them say of tests in math, history, economics, psychology, etc., that "a fact is a fact" and "you either know it or you don't." I've discovered that even some very bright students don't realize that thought is needed to answer some "fact" questions.

William G. Perry, Jr. has written an essay in which he explains why "bull" is not bad. (246)

cow (pure): data, however relevant, without relevancies
bull (pure): relevancies, however relevant, without data

Perry claims that students who wish to provide "cow" to teachers are trying consciously to be moral. Such students do not realize that facts out of context are meaningless, misleading, and destructive.

I begin each course with questions designed to change students' minds about "facts." I first ask them who they are and why they are taking this course. We then go on to discuss the sorts of questions that might arise in the course. We discuss the meaning of the question mark in the title of my course and we discuss the importance of questions.

Their first reading assignments are Booth's essay, Perry's essay, and "The Lost Tools of Learning" by Dorothy L. Sayers. I want students to understand where "I am coming from." I want them to know, before we get very far in the course, that I have the following stands on education:

Position:

1. There is no question whatsoever that American students are undereducated.

2. There is no question whatsoever that undereducating Americans is an undesirable and risky practice.

3. The widespread proliferation of specific "behavioral, cognitive, and/or instrumental objectives" is, educationally, a colossal failure that borders on fraud. These objectives began with the notion that all students in a classroom could somehow be brought up to exactly the same level if exact "objectives" for that level were stated.

4. It is imperative that each student be given the opportunity to go as far as he or she is capable of going. Good competition brings the overall levels of skills up. Even the "losers" benefit from competing. The teacher's goal in each class ought to be to expand the skills of each student and to give the students tools for continuing to expand those skills.

5. The primary changes in American classrooms since the decline of American education are:

   a) the replacement of books by workbooks and textbooks
   b) the replacement of facile learners by learning facilitators
   c) the replacement of content by method
   d) the replacement of competitive exams by normative exams

The effect of all of these replacements has effected the most important replacement of all: a student population that mostly had to be pulled has become one that mostly has to be pushed. The analogy to pushing rope or chains is especially apt.

392

6. A truly "core" or "heart" to an education needs to attempt to reverse each of the replacements mentioned in #5. If not, the "core" analogy shifts to apples. The emphasis should therefore be placed upon a) books, b) facile learners, c) content, and d) competitive work.

a) Books. Students should have as much exposure to reading books and writing about them as possible. This is, after all, the way something like 99 percent of formal human education has been done in the past and is done, except in America, today. The books should include standards and contemporaries, fiction and non-fiction, essays and whole works.

b) & c) Facile learners and content are so interrelated that they need to be discussed together.

Teachers are learners who know things. They know what they know and they know how they learned it. None of them learned by following a complex menu of objectives; none of them learned from sources that had beautiful methods with neutral content. We need to have teachers teach what they know and what they're interested in. The books that the teachers use should be related to their interests. I am not suggesting a laissez-faire, anything goes approach. There are many reasonable content areas of general interest. Forcing teachers to use content that bores them is guaranteed to bore the students. If they use the facility with which they learn to guide their teaching, students have a chance to learn.

d) College students need to make the transition from merely following orders to learning how to make decisions. Normative work prolongs the immature stage; competitive work enhances the transition. Whenever competitive course-wide exams are given, the teacher is transformed from an adversary to an ally. The tests can easily be made up of two parts: (1) reading new passages to answer questions about and (2) discussing something they've read in response to a general loss or question.

7. I am committed to a "trivial" approach, i.e., a return to Grammar, Logic, and Rhetoric in their proper roles. (Sayers describes them more fully in "Lost Tools of Learning.")

Grammar is understanding how language works; how distinctions are made, how names work; how allusions work, how texts differ, in short, knowing when pigs is pigs and when cores are not cores. Grammar is about words in contexts; it is not about a handful of mechanical rules. Grammar is an infinite subject about how words describe and misdescribe the world.

Logic is about resolving disputes and making choices; about the effects of emotion, evidence, and error upon debate; about the hardening, opening, and changing of minds. Logic is about disagreements in contexts; it is not about a pseudo-mathematical system for manipulating symbols. Logic is an infinite subject about how problems are solved and disputes resolved.

Rhetoric is about efficient and effective communication; about patterns of discourse; about simplicity, clarity, and euphony; about the give and take of principled debate. Rhetoric is about the connections of words and actions; it is not about clever manipulation of symbols. Rhetoric is an infinite subject about how words affect human lives.

Every course can expand our knowledge of and skill in the use of these three "tools" of learning. The competitive exams can include sections that require students to focus on one skill or another.

8. The emphasis of this approach is on what the student will be when he or she is no longer a student. I believe that that is what a core education is supposed to do.

What is student reaction to my attempts to get them to accept responsibility for their own knowing? Reactions range from amused incredulity to rage. Almost no one believes me at first. Some demand to know what all this stuff about epistemology has to do with learning a subject. Others demand an exact list of what they're supposed to do and know. As time goes by, however, most students discover that learning for themselves is more interesting. A substantial number of my students claim that I am responsible for changing their minds about the value of school and learning.

A few students are unwilling to accept my model, despite the reactions of their classmates. They have been convinced, or have convinced themselves, that school is supposed to be only one way: teachers give information which students give back on tests. These students like to complain and administrators tend to side with them. It's much easier to complain about a teacher's failure to follow uniform procedures than it is to complain about not learning.

The increasing split between administrators and faculty makes it difficult for teachers to teach. Administrators have less and less idea about the problems teachers face. Even if an administrator doesn't believe the "facts are facts" myth, it's still a convenient one. Class size is irrelevant if a teacher's job is only to lecture and give tests. More money can be brought in using larger classes. Teacher evaluation forms are biased in favor of the lecture-test model. In addition, in spite of the fact that most professors consider teaching their most important function, anyone under pressure to publish will prefer the lecture-test format.

The vision of millions of students learning billions and billions of facts is easily belied by almost everyone's experience. How much do we retain after cramming for tests? We retain and understand much more of what we have learned on our own terms. Unfortunately, there is too much power vested in angry students, administrators, and publishing faculty for them to voluntarily release students to their own ways of knowing. My intellectual analysis of the situation is that we will continue down the path of undereducation and miseducation to destruction.

The odd thing about my dismal prediction is that I can't fully accept it. Teaching my way is more fun, and I enjoy watching students learn to like reading, arguing, and writing. My faith that the system will fail is not as strong as my hope that it will not fail. (How can we fit charity into this?)

References

Booth, Wayne C. "Is There Any Knowledge That A Man Must Have?" 1967. Reprinted on The Norton Reader, 7th ed. 1988.

Harris, Sydney J. "The Main Thing You Learn In College," syndicated column, October 1972.

Perry William G., Jr. "Examsmanship and the Liberal Arts," 1963. Reprinted in The Norton Reader, 7th ed. 1988.

Sayers, Dorothy L. "The Lost Tools of Learning," 1948.

Shawnee State University. General Education Core 1987.

SPECIAL NON-TRADITIONAL/INTERDISCIPLINARY PROGRAMS

THE PROVISIONAL YEAR

J. Thomas Davis
G. James Burns

Purpose

The primary purpose of the Provisional Year is to make available within the University of South Carolina's Columbia campus a means to serve a special portion of the student constituency of this state who might otherwise be denied entrance into the University.

Students admitted to this program are selected from a group who present both qualitative and quantitative evidence of potential for academic success at the University of South Carolina. Consistent with the established philosophy of the College of Applied Professional Sciences, which administers and conducts the Provisional Year, the program emphasizes individual concern for students, teaching excellence, counseling, and career planning.

The primary goals of the Provisional Year are to provide intensive academic instruction; to improve the effectiveness of academic study, performance, and communication skills; to develop analytical reasoning skills; to prepare students to make appropriate degree, program, and career choices; and to ensure that students are academically prepared to work productively in their selected fields of study.

Admissions and Retention

Enrollment is limited to 250 students. Students offered admission to this program are drawn from freshman applicants whose predicted grade point average as determined by the USC admissions formula is at least 1.75 but less than 2.0. In addition, these entering freshmen must present strong evidence for future academic growth and performance as indicated by such criteria as (1) high class rank but marginal SAT scores, or (2) high SAT scores but marginal class rank, or (3) special talents in disciplines such as art or music.

At summer orientation, students meet with their advisors who serve as instructors in special University 101 sections. Close student/advisor relationships aimed at fostering student retention is stressed.

J. Thomas Davis, University of South Carolina, College of Applied Professional Sciences, Columbia, S.C.
G. James Burns, University of South Carolina, College of Applied Professional Sciences, Columbia, S.C.

Provisional Year Curriculum

Fall	Spring
1. ENGL 100U-Basic Writing or ENGL 101U-Composition	1. ENGL 101U-Composition or ENGL 102U-composition and Literature
2. PRSC 208U-Contemporary Issues or PRSC 108U-The United States	2. PRSC 208U-Contemporary Issues or PRSC 108U-The United States
3. PSYC 101U-Introduction to Psychology or PRSC 222U-Oral Communications	3. PSYC 101U-Introduction to Psychology or PRSC 222U-Oral Communications
4. One course in Mathematics or Science	4. One course in Mathematics or Science
5. University 101U	5. Elective (selected from area of major interest after consultation with advisor)

Since these courses are intended for application to baccalaureate programs, continued communication and cooperation is required among all related academic areas. Responsibility for determining the applicability of these courses to baccalaureate programs lies with the various collegiate/departmental faculties of the baccalaureate programs.

Transfer

1. In order to be considered for admission to a baccalaureate degree program, a student must successfully complete a minimum of 30 hours and meet the admission requirements of the appropriate degree granting academic unit.
2. A student who has not met the requirements for admission to a degree program at the conclusion of the Provisional Year may not continue at USC-Columbus.

Expectations

Students who successfully complete the Provisional Year will have been given a chance to realize their academic potential within a university environment. A continuing review of this program will be implemented in order to determine if the program is achieving its aims.

During the third year of this program, an evaluation will be conducted by the Faculty Senate Steering Committee which, in turn, will submit recommendations to the Faculty Senate for the Faculty Senate's action concerning continuation or alteration of the program.

Elements of the Student Contract

Those students admitted to the University under this policy are subject to the following regulations:

1. The Provisional Year student must enroll in five of the specified courses each semester and maintain full-time status (at least 12 hours per semester) in order to remain in the program.

   Students who wish either to drop a course and/or complete up to two courses in summer school must obtain the prior approval of the College's Committee on Scholastic Standards and Petitions. No student, however, will be retained in the Program if the student fails to complete 12 hours in each of the Fall and Spring semester.

2. In the course of 12 months, the Provisional Year student must successfully complete the specific thirty semester hour program and must attain a minimum grade point average of 2.0 in order to be considered for admission to a baccalaureate degree granting unit at USC-Columbia.

3. That student must meet the specific requirements for transfer into the appropriate baccalaureate granting academic unit.

4. At the end of 30 hours, a student who does not meet the requirements for admission into a baccalaureate program at USC-Columbia may not continue on this course. Prior to leaving, that student will receive careful guidance regarding other educational and career opportunities.

5. A student who withdraws from the Provisional Year Program for legitimate medical reasons may be permitted to return to complete the program. Both medical withdrawal and reinstatement must be approved by the College Committee on Scholastic Standards and Petitions.

A PROPOSAL FOR A MULTIDISCIPLINARY Ph.D. PROGRAM IN THE SOCIAL SCIENCES

Carl Goldschmidt

Introduction

It has become increasingly evident that many institutions of higher education in developing nations have a need for faculty members in the social sciences who are not exclusively specialized in any one of them. Educational needs seem to be always in excess of the resources needed to meet them, so breadth in social science faculty members' talents and academic backgrounds may have a higher priority than depth; the ability to teach in several areas may be more essential now than a high level of expertise in any one of them.

Of course, the situation sketched above is very similar to that which small North-American colleges have faced for a long time. So it is expected that a program here proposed could serve equally well some present and future faculty at institutions much closer to home.

The attraction of a multidisciplinary Ph.D. is that it will, if designed appropriately, provide its students not only with thorough knowledge of three social science disciplines, but will also involve them in research in each and, it is hoped, supervised teaching opportunities. Thus, the breadth of academic knowledge and experience will be quite analogous to those gained by students in the included disciplines. The benefits of the multidisciplinary character of this degree program are traded off for both substantial depth, as well as sub-specializations in each discipline.

If adaptability is a watchword in higher education curricula in the future, it needs to be applied as well to higher education faculty. It is vital that all of us in academia keep our senses attuned to shifts in the winds of society, not only in professional degree programs, but in the traditional disciplines as well. By being considerably more independent of the disciplines than the discipline-based doctoral programs are able to be, the program here proposed would optimize desirable opportunities for change.

Carl Goldschmidt, Ph.D., Director, Social Science Multidisciplinary Program, Baker Hall, Michigan State University, East Lansing, Michigan 48824-1118

Some Relevant Characteristics of Present Doctoral Programs in the Social Science Disciplines at Michigan State University

The College of Social Science at MSU includes five disciplinary departments: Anthropology, Geography, Political Science, Psychology, and Sociology. Even though at this university, Economics is a department in the College of Business, it will be included as one of the traditional Social Sciences. Each of these six offers its own Ph.D. degree, and each of those degree programs includes course requirements.

It is not unusual that the precise content of the course work portion of doctoral degree requirements is determined by the student and the student's guidance committee; formal "catalog" requirements are more or less general. So it is with these six: at one end of the range, there are no credit requirements for courses in two of the programs, a minimal requirement in one, but requirements of at least 51, 60 and 84 quarter credits, respectively, for the other three.

In any of these programs, a modicum of multidisciplinary study is possible, and may even be encouraged. However, since none of them has a multidisciplinary structure, they obviously cannot meet possible objectives of such an orientation reliably.

The customary ingredients of doctoral programs faculty guidance committees, comprehensive examinations, dissertations and their defenses - are all there, and are firmly institutionalized. It is clear that they will be parts as well of any future doctoral program in the Social Sciences.

In the College of Social Science at Michigan State University there is another group of very successful Ph.D. programs. These are in four of the professional fields represented in the College: Criminal Justice, Labor and Industrial Relations, Social Work, and Urban Planning. While each of these is obviously focused on its respective field, they are all multidisciplinary in structure. Each requires 92 quarter credits of course work, with a minimum of 40 credits in the major field, another 40 credits in a social science (or 20 credits in each of two social sciences), plus course work in research methodology. This program structure is the one which will form the basis for the proposal below

A Multidisciplinary Social Science Ph.D. at Michigan State University

The proposal here is unusual in that it is not for a new degree, but rather for the resuscitation of an existing degree program. Michigan State University's Social Science Multidisciplinary Program (conventionally, though inaccurately, referred to as MDP) has been in existence in various incarnations for about four decades. For all of that time it has offered bachelor's degrees (which roughly 12,000 alumni hold), and for much of the time the M.A. (a much smaller program, still very active), and. the Ph.D.

While available institutional history does not make clear when the Ph.D. was instituted, we do know that during the years 1974 to 1981 nine students earned that degree. In 1980 the College decided not to admit additional students to the program, and so it became dormant.

There were no intrinsic problems with the degree program not capable of resolution by program adjustments. It did, however, create certain circumstances for its students which are different from most other doctoral programs. Since these circumstances will, in some form, affect a successor Ph.D. in the Social Science Multidisciplinary Program, they will be noted here.

1. The Multidisciplinary Program does not offer classes; all of its students take classes in the University's various teaching units, predominantly in the Social Sciences. Thus the program has no teaching faculty which - for its graduate students - means no primary pool of guidance committee members. Conversely, there is no such pool whose primary graduate student interests and concerns focus on our students. We have very good relations with the several departments and schools in the College of Social Science (and with others in the University), and our master's students have always succeeded in assembling committees. The tasks of a doctoral guidance committee are substantial and relatively long lasting, compared to one dealing with a master's student, and there could be greater difficulty here for the student. This could be exacerbated by an envisioned gradual reduction in the number of faculty at MSU, naturally not expected to be accompanied by a proportional reduction in the number of students.

2. Unlike disciplinary doctoral students, who tend to form a natural support group, forming such a group would be more difficult for MDP students. It can be facilitated by such things as a common room or office space for their exclusive use, and by an informal network of information on course and faculty experiences. But it is clear that, in order for our doctoral students to have a "home" turf, responses to this need of their studies here are essential.

The proposed program leading to the Ph.D. in Social Science is intended for those who wish to pursue advanced graduate study and research in several fields of the Social Sciences. This multidisciplinary program will provide a broader orientation than disciplinary doctoral programs, and is based on the principle that this broad focus constitutes a desirable preparation for a growing number of academic career tracks, especially in those smaller colleges, as well as in institutions in developing countries. Thus the principal dimension of the proposed program emphasizes knowledge and training as preparation for some such career in teaching and research.

As noted, the new Ph.D. program in MDP will be patterned on the existing professional doctoral programs in the College of Social Science. Accordingly, it would require a minimum of 92 quarter credits of course work past the bachelor's degree, plus the MSU required customary 36 credits for dissertation research. The 92 course credits would comprise a minimum of 27 credits in each of three social science disciplines, and a minimum of 11 credits in methodology courses clearly relevant to the student's intended research. The entire course work program is subject to the approval of the student's guidance committee.

Intended for inclusion in the 27 credits for each field are courses which will comprise core knowledge of each discipline and foundations for each of the required three research projects preceding the dissertation. Those research projects are expected to provide the student with basic research skills in each individual discipline, just as the dissertation will include research of a multidisciplinary nature. For the later portions of the studies, it is expected that the multidisciplinary Ph.D. student will serve as a teaching assistant in each of the three disciplines, finally assuming principal responsibility for a course. After course work is completed, comes the comprehensive examination, followed by research, dissertation and defense.

Characteristics of the Proposed Program of Particular Benefit to the Target Institutions

The presumed demand for this degree has been alluded to above. What are some of the reasons why this kind of a doctorate is preferred, in certain kinds of academic situations, to the traditional disciplinary doctorate in one of the social sciences?

Let's start with an aspect not mentioned above. General education has become accepted as an essential component of undergraduate education in the United States. That is true, even though there are numerous models through which this education is delivered to the students; some of those models have eschewed the label General Education. If a general education program includes, as it should, a distinct social and behavioral science component, then those teaching that part should have knowledge, interests and teaching abilities, all of which are general as well. A student in a disciplinary doctorate program usually has little incentive toward a purposeful seeking of breadth: satisfaction of the disciplinary course requirements articulated by the guidance committee (itself composed mostly or entirely of faculty from a single discipline), passing the comprehensive examination in the major, and a successful dissertation process - again, in the major discipline - are paramount objectives.

This situation suggests that many faculty presently teaching social and behavioral science general education have had no formal academic preparation for it. We have seen some of the consequences: general education becomes gradually less general by becoming more specific. One of the results can be seen at MSU the general education departments have been abolished, their tenured faculty members dispersed to their respective disciplines, and the task of teaching general education delegated to the departments in the core colleges.

No one assumes that a cadre of faculty educated in multidisciplinary social science will eliminate, or even significantly reduce, campus-politicization of general education. However, the conflict between discipline-based scholarship and multi or interdisciplinary teaching would be reduced substantially; the "general" in general education would have some knowledgeable supporters, and the unified diversity of the social sciences would have well qualified classroom interpreters.

That brings us to the smaller colleges, an aspect mentioned at the beginning of this paper. For many of them, instruction is the number one priority; indeed, to the extent that private institutions depend on student fees, superior instruction in order to keep classrooms filled is a matter of survival. A separate department for each of the social science disciplines is rare at those institutions. In fact, we are well aware that social science departments have been abolished, even at distinguished universities: geography at the University of Michigan, and sociology of Washington University are but two examples.

It appears, therefore, that one or two multidisciplinary social science departments may well become increasingly attractive at small colleges, pedagogically as well as fiscally.

The component of the proposed Ph.D. program which requires the student to complete, before the dissertation, a research project in each of the three disciplines is intended to insure that the graduate will be equipped to undertake basic disciplinary research, as well as the multidisciplinary research which is a focus of the program. Similarly the service as a teaching assistant in each of the disciplines will introduce the student to the instructional objectives and methods of each, and should result in better preparation for later teaching in those fields.

Some Problems, Some Solutions

Assuming that the skeletal proposal indicated above can be fleshed out into a full program, with what obstacles must we contend? Some of the concerns of the potential students have already been mentioned, as have possible ways of responding to them.

The issue of financial aid sources is a difficult one. These days, university-based assistance for those doctoral students without outside support is very important. A new program, without a track record, is not likely to find it simple to get a piece of our shrinking College resource pie. So outside funding appears to be the way to deal with this need, and that is a tough task as well. Both applications and enrollments in the social science disciplines' doctoral programs at MSU have held up very well, and have consistently generated high ability student groups. The limiting factor has been funding: doctoral students often go to the institution which offers the most in financial help, so that less funding has meant fewer of the best students. Nevertheless, it is unlikely that the establishment of the multidisciplinary Ph.D. would bring about competition for students with the disciplines. Based in part on the rate of inquires we continue to receive (the result of reference to outdated MSU catalogs), the pool of potential students for the social science multidisciplinary Ph.D. is sizable, and probably overlaps only slightly with the several pools for the disciplinary doctorates.

A more significant potential for competition lies in the demand for limited faculty time. Faculty members are willing to serve on committees for student in whom they are interested, the focus of whose studies and research is in accord with theirs, and to whose doctoral education they believe they can make contributions. For students outside of a faculty member's department, all of these factors are more difficult to achieve. Moreover, if the choice of advisee is between one who is a major in the committee member's discipline and one who is in the multidisciplinary program, the reasonable choice is likely to be the former.

The issue of faculty time availability is likely to be one of the higher hurdles for the proposed program. Surmounting it will likely require solid administrative support, discussions with as many potentially affected faculty members as possible, and considerable application of the sizable store of good will which MDP has been able to build up over the years.

Conclusion

The proposal outlined here is for a program which clearly would serve to meet an important educational need, for which there appears to be an existing demand which is likely to continue, and which is readily doable. With the exception of the importance of student financial aid, the need for new money will be minimal: with the anticipated enrollments - very modest and rising only slowly - no new staff would be needed, and the establishment of a doctoral students' work room is likely to be only a paper cost. The vital task is more detailed development of the proposal, including the appropriate reflection of relevant experiences at other institutions. Then the approval process can be started.

A COMMUNITY FOR LEARNING: RESTRUCTURING THE NON-TRADITIONAL PROGRAM

Tamsin L. Hekala

Introduction

City University is a private, non-profit educational institution designed to deliver quality educational courses at times and places convenient to the working student. Its academic organization has three levels: site instructors, master instructors, and senior faculty. Authority is centralized, while teaching activity takes place at far flung classroom sites, reflecting City University's physical organization of main campus with outlying classrooms. Bellingham, Washington is one of the distant classroom facilities.

Bellingham is located twenty-five miles south of the U.S. - Canada border. It is an area that has been predominately rural and is currently experiencing rapid urbanization. In the next five to ten years, according to the Chamber of Commerce, it will become a satellite community for the Seattle area. Projected population growth is minimally triple current population numbers.

The initial situation with the Bellingham site was one of disorganization and misinformation. Distance from the home office, as well as, distance from supervisory personnel created the common problems of low morale, isolation, misinformation, and misappropriation of authority typical of a main campus-outlying class site structure. Administrative requirements as to student enrollment numbers, coupled with distant academic authority created an opportunity for the site administrator to control both administrative and academic arenas. Instructors were encouraged to stay or leave based on student popularity or complaint, course content was diluted per student complaint, and instructional requirements were met by the administrative staff to insure increased student enrollment. Misinformation included withholding of pertinent information concerning faculty activity, student complaints, and classroom methodology from the master instructor located in Bellevue as well as critical information about the area. At no time was the general student population's needs, composition, or established university policy considered in the drive for increased numbers. This situation was resolved with the replacement of the site personnel and the appointment of an on-site master instructor.

Tamsin L. Hekala, Master Instructor, City University,
P.O. Box 3368, Blaine, WA, 98230
Copyright 1990 Tamsin L. Hekala

The Student Population

Student population for the Bellingham site breaks down into three of the four categories of students one typically finds at City University. These are:

1. Students who never anticipated the need for college given their career path. This group has either risen to a supervisory level or wants to, and has found that a B.A. is required to retain or obtain the desired position. Typically, for this group, they never took college preparatory classes, so they never had the basic skills.

2. Students who took classes in either high school or college more than ten years ago. This group, while possibly having had college preparatory classes, has forgotten the basic academic skills.

3. Students who graduated between 1969 and 1979. This group was taught to be creative. Basics such as grammar, spelling, and basic sentence structure were never part of their background.

4. The fourth category is that of international student. This group, while currently not found in Bellingham, is found with increasing numbers in City University as a whole.

Academic Program Needs

Given the student population, several program considerations must be addressed: student expectations, content knowledge, language proficiency, and classroom methodology.

Student classroom expectations on returning to school, at either a graduate or an undergraduate level, are at best uninformed and at worst unrealistic. The population, as a whole, deals best with detailed specific guidelines as to classroom activities, exams, and papers. Even with the standardized syllabus, students are uncertain as to classroom expectations. This uncertainty is due, in large part, to unfamiliarity with the academic setting.

The typical student requires a graduate level knowledge of the subject presented. This derives from two factors: first, that the student is older and more mature; and second, the student often has a good practical knowledge of almost any subject we offer. Our current requirement of experience and classes in a subject properly addresses this issue.

Language proficiency skills for this population of students is limited. Whether or not the students were taught the basic skills of composition, grammar, or speech, upon entry to the City University programs, the skills are not adequate for basic course requirements. Remediation of basic grammar, spelling, and form occurs for all students in all classes.

The classroom methodology needed for this population is secondary level. This methodology for three reasons: first, it was the last classroom experience for many of our students; second, it keeps the instructor rigidly on task. Third, the most effective and popular instructors have either a solid body of experience at the high school level or have training in secondary classroom techniques.

Instructional Staff

Applicant instructors have a standard profile of characteristics. Typically, all have at least one and often two advanced degrees, teaching experience is either non-existent or within the context of occupational training. They are the first generation to be educated above high school, and most, have a background in public speaking.

The greatest variant among applicant instructors is the reason for wanting to teach. This variable can be broken down into the following categories: bolstering the resume, establishing their name in the community, desire to teach part-time, and using the experience as a stepping stone.

The usual applicant falls within one of these four categories. An applicant with the preferred combination of classroom and occupational experience in equal amounts is a rarity. Most of the applicants have no classroom experience. It should be noted that regardless of experience, most prospective instructors, while having the required advanced degree, do not have problem solving skills, research skills, or an educated perspective of the world. This lack is endemic to their background, their occupation, and their training.

The instructors, currently in the Bellingham teaching pool, had a variety of challenges typical to disassociated and isolated personnel. Among the faculty members low morale, feelings of isolation, ignorance of teaching methodology, no understanding of organizational structure, and ignorance of policy were the norm rather than the exception.

As a whole, faculty had no understanding of either the organizational structure or organizational policy as it applied to the position of instructor. Each instructor perceived his position as unique and isolated with no support and limited contact with academics. The corollary perception was that as long as you used only the standard textbook and kept the students happy one would be retained. Ignorance of policy contributed to the inability to meet general academic goals set by the university and specific course objectives as stated on the standardized syllabus.

Teaching methodology, with rare exceptions, was a regurgitating of the textbook materiel to the students. Since the syllabus is textbook dependent, so the lectures, the tests, and the assignments were all dependent upon one source, one view, and one battery of test questions.

Although there are support systems, and a chain of command for instructors, the instructors rarely worked through the established paths and, more commonly, referred all problems or questions to the site administrator. Instructors, ignorant as to appropriate authority, went directly to the site administrator. The master instructor for the site was regarded as a figurehead with no discernable duties or power. Thus, instead of exercising the appropriate channels for support, problems, and concern, instructors used incorrect channels, thereby, insuring a continuance of the problem.

Instructional staff, hired on the basis of degree, work experience, and finally teaching experience, were often thrown into the classroom with little or no support. This resulted in a "sink or swim" appraisal mode, where those quick on their feet swam and those not so quick sank. No maturing of new, potentially valuable, instructors was possible in such an environment. Faculty development was limited and information centers distant. This increased unnecessary instructor turnover; while subject requirements, student needs, and teaching methodology were never considered.

Programs To Fit The Needs: Creating A Community For Learning

Careful consideration, of both the faculty and the students, revealed a basically disenfranchised population in Bellingham. Any population so structured has no cohesion, no commonality, and no sense of community. The lack of community, for all practical purposes, negates the actions and activities used to promote organizational goals. The appropriate response to counter all negative factors discussed, is the creation of a community for learning. Such a community nurtures both student and instructor, facilitates personal growth, and creates a continued pattern of success for all participants. The programs created to foster this community are: specialized teacher training, teaching assistant program, methodology classes, increased observation, additional evaluation factors, increased contact, probation, year long class assignment commitment, rotational recruitment, student programs, basic academic skills classes, and increased communication among faculty, staff, and students.

Faculty Programs

A traditional teacher training device is the teaching assistant. Ideally, an experienced instructor takes a knowledgeable student and provides a controlled, safe environment for the instructional experience. It is not necessary to provide years of instructional practice an adaptation of the idea to our instructional needs was possible. First, any potential faculty member without classroom experience must enter this program for a term. Second, all TA program participants must attend a series of specific skills classes. Third, all participants must agree to open observation schedules, in other words, drop-in observations may be made at any time.

A series of methodology specific classes were required for all instructors. These classes included teaching techniques such as: ITIP (Instructional Theory Into Practice), defining objectives, worksheets, diagnosis training, and how to write examinations for different objectives. Such classes provided faculty with key information about the classroom experience, student developmental skills, an understanding about appropriate classroom expectations. It also involved them in a cycle of training for success.

In Bellingham, observation is regarded as a tool for instructor improvement, not distrust of the instructor. All faculty should be so comfortable with observation of their teaching techniques that any walk-in observer would find the same class as the student. Observation is made in person and on film for evaluation of teaching style and methodology. If faculty members are familiar with constant observation, instructional style becomes clarified and teaching quality improves.

Instructor evaluation is currently based upon SIR's (Student Instructional Reports). Heavy reliance upon SIR's does not give administrative personnel a balanced view of instructor performance, methodology, or student-instructor interaction. It does indicate how popular the instructor is with the students. Peer review, coupled with regular filmed observations, is a better indicator of instructor success in the classroom. Regular unscheduled observation of class performance is a hallmark of the most effective educational organizations.

The current responses for an instructor with an poor SIR are either to discuss the problem or refuse to recommend for any further teaching assignments. There are a number of usual situations that can lead to a poor report: unexpected stress at home or work, illness, a quantitative class, an inexperienced instructor, or student dislike of appropriate instructor methodology and expectations. If, for whatever reason, an instructor has an SIR with a 10 percent rating, then the master instructor should, if appropriate, implement a probation scenario.

Probation places the instructor in a more controlled classroom environment, allows for additional methodology instruction, and permits faculty maturation. The probationary instructor re-enters the program as a teaching assistant. The one major difference is this, after going through the teaching assistant term they will have the commitment of a single class with observation. Retention will be based on overall observed improvement and the SIR. Since there is a term lag in receiving the SIR, the probationary instructor also agrees to skip the term following their observation class.

Preliminary response to increased faculty-master instructor contact has been very favorable. The good instructors welcome the contact, the fair instructors improve their classroom effectiveness, and the poor instructors are more easily spotted. Increased contact depends upon a willingness, on the part of the master instructor, and senior faculty to expend energy arranging contact situations. Increased contact assists with the following areas: instructor knowledge of policy, increases morale, speeds up classroom requests, ensures effective course preparation, builds a community of information for new instructors or instructors with a challenge in class.

Current recruitment is haphazard for outlying sites. Often the community has little awareness of the site's existence, let alone what City University is or offers. Most sites are dependent upon a few "old timers" who have taught a broad range of classes. If an "old timer" is found to be unqualified, unprofessional, or incompetent; a replacement is usually not available. Recruitment has been either blanket application from the applicant or general advertising controlled at the main campus. Given the past recruitment techniques, if a candidate has minimum qualifications there is usually a need, and therefore, a job. The teaching pool then tends to be, at best insufficient, at worst nonexistent. Response to blanket applications by personnel is slow. All in all this guarantees dependence upon current instructors, limited second stringers, and non existent teaching pools.

Recruitment needs to be a continuous process with specific areas covered every term throughout the system. A rotating advertisement campaign indicates growth, and increases the teaching pool. Each class should have a triple instructor level, which eliminates most last minute instructor placement scrambles. Pre-approval and year long commitments also decrease last minute placement problems.

One of the major frustrations for instructors in our system, all of whom are adjunct and contracted per class, is not knowing what they will be teaching during a year. In an effort, on the part of the main campus, to maintain part-time adjunct faculty instead of permanent full-time instructional staff many fine instructors were lost. Lack of yearly class assignment commitment increased the speed with which faculty race through the system. Most instructors perceive this unwillingness as a reflection on themselves not as a flaw in the system. Commitment to classes in Bellingham was made on a yearly basis, with the understanding that actual teaching assignment contracts will be issued based on class enrollment. Year long approval only works if each instructor is pre-approved for the classes.

The physical setting of City University, controlling main campus with far flung class sites, demands active, highly visible, consistent support of front line personnel. Individual sites require a master instructor's presence on site, stated office hours, increased face to face contact, availability for problems or advice, and response to in class situations. In other words, the master instructor must provide the manager aspect of the manager-employee relationship.

Student Programs

Instructor effectiveness can only occur if we train the students as well as the instructors. Since most students have no college level experience their expectations, skills, and general academic ability are limited. If instructors are trained then they should not use valuable class time doing general remediation of the student body. The need for remediation can be addressed two ways: first, by a series of basic skills classes which provide the student with the skills to succeed and; therefore, remain in the system. Scond, entrance testing, not to exclude students, but to place them correctly in the program.

Basic skills classes are not only desireable but necessary for an academically inexperienced student population. Such classes prepare the student for the academic setting, remove blanket remediation from the instructor's shoulders, and give students tools for success. These skills classes should include: basic academic skills such as taking tests or notes, basic writing for college, basic math review, and Prior Learning Experience assessment. Such classes constitute a core series, which the student takes, upon entering the system. As in other institutions these classes need not be full credit but should be required. Graduates, while supposedly not needing basic skills, should be subject to an orientation course highlighting the differences between graduate and undergraduate programs.

Situations have occurred in Bellingham that necessitated testing of individual students. At this time the cost of diagnostic testing has been carried by either the student or the instructor. Coupled with the basic skills courses is the need to initiate skills testing for all students upon entry to the university. It must be stressed that these would not be for the purpose of refusing admission if a certain skill level was not revealed, but for the sole purpose of skill assessment. The student population often chooses City University because they are certain that they will not be turned away. They are also certain that pressuring instructors will keep their grades at the minimum needed for maintaining their status. If we test for skills in our general population, as we do in our international population, then we will strengthen our position as a unique institution addressing the needs of the non-traditional student. We will present a strong response to the perception that non-traditional programs are the refuge of the incapable. For the students we can identify the actual skill level of the student population, catch the marginal student early on, and remediate before that student leaves the program. The increasing numbers of international students in City University as a whole, makes basic skills testing above the TOEFL not merely desireable, but mandatory.

Current Site Status:In-House Co-Operation

After the replacement of the former administrative personnel, a series of joint projects were initiated. Needless to say, these programs would have been impossible had there not been extensive co-operation between administrative and academic personnel. Establishing a team approach required not only normal business courtesies, but also, well defined referral systems and awareness of University policy.

It was determined by the administrative personnel that retaining current students, increasing communication between the University and the students, and a clearer idea of academic needs and concerns, would facilitate student retention and increase enrollments. These areas have been targeted as joint projects by both the admissions representative and the master instructor.

Realizing that open communications lines aided both admissions and academics, admissions began a site newsletter, which keeps all current and continuing students informed on basic site information.

In response to instructor concerns and to aid student retention, a series of basics classes were designed and offered to the students by the master instructor. Since faculty were required to become more proficient in their instructional methodology it was decided that remediation should not be their concern, but the concern of the master instructor.

The final areas of co-operation were those of shared divisional need and an established complaint referral procedure. Books and general information from Bellevue have not always arrived promptly; therefore, it was determined that a personal delivery service would be set up for the site. Both the admissions representative and the master instructor have frequent contact with Bellevue personnel and facilities. This personal contact with the main campus has stopped or circumvented a variety of problems. In addition to co-operation with each other, a clearly defined complaint referral procedure was also initiated.

Current Program Status

Instructional staff status in Bellingham currently consists of a knowledgeable core faculty comfortable with increased contact, increased demands, and the academic chain of command. Those former faculty members who either could not or would not respond to the program have been culled from the teaching pool. New faculty are all brought in through the teaching assistant program. At this time the SIR reports for the site are beginning to move toward the stated goal of 80-90 percent in all areas. Individual instructors are receiving 100 percent in the areas of communication and organization.

Current status of continuing programs appears to be good at this time. Instructors have improved their instructional skills so that basic classroom management is not an issue. The teaching assistant and probationary instructor programs also appear to be working. New instructors and probationary instructors are managing well as indicated by confidence and stable class attendance. Further tracking is necessary for statistical documentation of these programs.

Basics skills classes have been attended by approximately 30 percent of the student body. Individual students have been enthusiastic about the subsequent instructor response to those basic skills. Formalized tracking of this control group has not been established.

Conclusion

Response from both the faculty and the students has been positive to all the changes that have taken place in the past year. Increased professionalism on the part of the faculty has been well received by the students once the first shock of change had passed. Faculty morale has jumped with the implementation of the faculty programs and increased contact. General faculty response to observation by either individuals, or video tape is positive. All faculty have regarded increased methodology as a bonus.

Although this site is currently improving, two items must be noted: first, that additional tracking of the programs is necessary, and second, that the changes instituted at Bellingham are personnel dependent. Unless the programs are implemented throughout the organization they will cease with the changing of the guard. Without the continuance of the community for learning, we do a disservice to our administrative personnel, our faculty, and our students. We will return to a learning environment that does not work, faculty who are disenfranchised, and the appearance of a high priced papermill. More importantly we, as a non-traditional institution, will retain the image of second rate, a poor cousin in the academic community.

A COMMUNITY FOR LEARNING:
RESTRUCTURING THE NON-TRADITIONAL PROGRAM

How to restructure the program at City University to more effectively address the needs of a non-traditional student population is the basic question of this report. Bellingham, Washington, a small site in a rural area experiencing rapid urbanization, was chosen for the situation analysis.

A year's study revealed four specific groups, in the non-traditional student population, based on acquisition of skills in high school, and language proficiency.

Instructors also revealed a standard profile of characteristics: type and number of advanced degrees, teaching experience, generation to be educated above high school, and background in oral presentations.

Tailoring the program to fit the newly perceived needs of both student and instructor is the challenge. Program changes are suggested in light of student expectations, academic basics, and classroom methodologies. New programs are recommended for faculty and students based on corollary skill development.

The solution: restructure to create a community for learning that nurtures both student and instructor, facilitates personal growth, and creates a continued pattern of success for all participants.

THE CHALLENGES AND BENEFITS OF THE WELFARE REFORM ACT FOR THE COMMUNITY COLLEGE

Oscar C. Jensen
Ralph E. Garrett

Introduction

The implementation of the Welfare Reform Act of 1988 has created many challenges and benefits for the community colleges in the United States. The act requires that every welfare recipient that can be placed in jobs be given training in order to do so. These training programs, both academic and non-academic, are intensively operated on an 8 a.m. to 4 p.m. schedule.

One challenge is the retooling of academic programs, such as Child Day Care, Nursing Assistants, Keyboarding, Word Processing, etc., into day long training sessions, lasting several weeks. There are also industry related training programs that require curriculum development and often equipment procurement. Another basic challenge is to devise curriculum components for placement skills, image enhancement, personal and group counseling, and placement assistance to change the unmotivated welfare recipient from long-term welfare dependence to becoming a productive worker. A third challenge is for the community college to open new lines of communication with state and local social and human services agencies. Often these agencies are distrustful of the college and require the college to "prove itself."

The Community College of Baltimore began developing academic and non-academic programs for this population in the spring of 1989. When the law was implemented in the fall of 1989, the first program was begun. This program was created to fill the employment needs of the mailrooms and mailplants of the city who estimate they need over 1,000 new employees annually. The training curriculum was developed with industry personnel and the placement, image enhancement and counseling components developed by the college's placement office. Each program is six weeks long with the time evenly divided between training and placement, counseling and image enhancement activities. There are 5 of these programs for Nursing Assistants, Geriatric Aides, Child Day Care Workers, (all three certificate programs), Keyboard and Word Processing skills.

Dr. Oscar C. Jensen, Manager of Government Grants, Business and Industry Center of the Community College of Baltimore, 600 E. Lombard Street, Baltimore, MD 21202
Mr. Ralph E. Garrett, Director, Office of Job Placement & Cooperative Education, 2901 Liberty Heights Avenue, Baltimore, MD 21215

The successes of the program have been a 90 percent retention rate, a 60-80 percent placement rate and funding to cover all costs and obtain additional resources and equipment. Another success factor has be the production of students who have enrolled in academic programs beyond their training.

In Baltimore, Maryland there are approximately 80,000 welfare recipients. This population can become a new source of students as well as assisting the institution in fulfilling its community service mission.

The Welfare Reform Act

The Welfare Reform Act of 1988 states that the new welfare program will emphasize work, child support, and family benefits, and will amend Title IV of the Social Security Act to encourage and assist needy children and parents under the new program to obtain education, training, and employment. These steps are needed to avoid long-term welfare dependence, and to make other necessary improvements to assure that the new program will be more effective in achieving its objectives.

The specific areas of education delineated by the law include high school or equivalent education (combined with training as needed), basic and remedial education to achieve a basic literacy level, and education for individuals with limited English proficiency. Also included are job skills training, job readiness activities to help participants prepare for work, and job development and job placement. These services must also include at least two of the following; group and individual job search, on the job training, work supplementation programs, and community work experience programs. The State may offer participants postsecondary education in appropriate cases. Child care must be provided for the children of the participant.

The 1988 Welfare Reform Act can be beneficial to the Community Colleges. All community colleges operate the full spectrum of remedial courses to prepare students to enter academia. We now have the opportunity to obtain local funding and enhance and expand our programs and equipment to prepare people to enter the world of work and, for some, to enter the world of academia. There are many academic (for credit) stand-alone programs like Child Day Care that can be made available to the welfare recipient with little or no retooling of curricula. All of the programs operated for welfare recipients are locally directed with Federal and State funds.

The Community College of Baltimore's Program

The Community College of Baltimore is designated as the public agency to supply Literacy, English as a Second Language, Adult Basic Education, GED, Adult Education, and Continuing Education to the citizens of the City of Baltimore. This arrangement has been operating since 1986.

The Community College of Baltimore has established a Business and Industry Center, which controls the Harbor Campus of the college. In the spring of 1989 the operation of all training programs for welfare participants was shifted to the Business and Industry Center with Dr. Jensen working with the Center's Director, Mr. John Frey.

The Baltimore City Process

The Baltimore City Office of Employment Development issued an open-ended request for proposals which detailed the parameters of information required for any agency to obtain funding. Program proposals must be for the unemployed and/or economically disadvantaged who may be handicapped, receiving public assistance, offenders, and youth 18-21 years of age. The proposals are evaluated against the following criteria:

1) documentation of labor market demand
2) placement wage rate
3) comparable demonstrated past performance
4) quality of proposed curriculum, training plan, or activity
5) quantifiable goals and performance measurements
6) cost effectiveness
7) promotion of economic self-sufficiency for participants
8) in-kind contributions of the proposing organization including counseling and support services to participants
9) content and entry criteria appropriate for the population

Priority is given to potential contractors who are willing to accept the following performance expectations as part of the contract with responsibility for employment:

1) 85 percent of enrolled participants will complete training
2) 80 percent of enrolled participants will be placed in unsubsidized jobs
3) average placement wage of $5.00 or higher

In January, 1989, the Community College of Baltimore began establishing a series of liaisons with City, regional, and state agencies. These liaisons were needed to determine the role the Community College would play in servicing the estimated 80,000 welfare recipients in the City. The involvement of Mayor Kurt L. Schmoke assisted in the establishment of guidelines with the Baltimore Office of Employment Development, the employment training and development agency of the City. The agency will be the prime funder of the Welfare Reform Act training and job placement programs.

In the same month, the Community College established a Task Force to assist the consultant with the design of curricula, placement training and operation, and counseling services. The Task Force is chaired by the

President of the community college with faculty and administrators as participants. The first decision made was to develop a pilot 6 to 8 week program to operate during the current fiscal year. This will afford the staff and the Task Force the opportunity to assess the delivery process and procedures. The choices were to offer a course for day care workers which would enable the clients to obtain their state certificate and a course to train mailroom/mailplant employees as requested by the industries spokesmen.

The second stage of development will be to begin offering the programs already in place for ABE, ESL, and GED. These programs will become available after the negotiations with the Office of Employment Development are complete concerning previously cited placement requirements. The decision was determined the ABE, ESL, and GED training would be followed with a skills training program then placement would take effect.

The first program implemented was a six-week course to train Mailroom/Mailplant works. Completion of this program qualifies the student to enter the mail handling industry. The curricula for this program includes 100 hours of classroom work, 16 to 24 hours of work site training and 52 hours of motivation, image enhancement and placement training. All of our academic programs and non-academic programs include the training, work site experience, and placement motivation and image enhancement components to ensure that the graduate has gained the skills, demonstrated the skill, and has been prepared for the world of work. The Community College of Baltimore has reached an agreement with the Greater Baltimore Committee (the City's Business and Industry Association) to obtain placement need directly from employers. This first program was requested by the mail handling industry and has gained national recognition.

The uniqueness of these training programs are that academic and skills training are offered on an intensive basis with classes beginning at 9:00 a.m. and ending at 4:30 p.m. Each day, Monday through Thursday, the student receives five hours of skills training and one to one and a half hours of placement, image enhancement, and counseling. Every Friday is devoted to a work experience activity giving the student a hands-on training experience.

A full-time counselor is with the class throughout the training period. This person provides individual and group counseling on personal as well as employability problems and skills. With this person are: placement coordinators, a full-time secretary and a program administrator to ensure that all supportive services are maintained at an optimal level, thus providing the student the best opportunity for success.

The employability development component of this program is conducted in a 62 hour time span. This includes field visits, on-the-job work experience, self image enhancement, placement skills and work ethics skills. The curriculum for this program will be available at the conference.

On Friday's the class is divided into teams of 3 people each who are placed for two (2) days in a mailroom and two (2) days in a mailplant. At the work experience site a coordinator is hired by the program to work with and oversee the work activities of each team. This activity gives each student hands-on experience and gives the employer a close look at potential employees. This has proven to be a valuable placement tool.

The Bottom Line

There are several challenges to any college that becomes involved with this program. The college must develop new relationships with local social services agencies who often have looked to the proprietary school section to contract for services or these agencies have created their own training structure. We have to learn their language and understand their structure. The welfare recipients who are referred to training are often unmotivated and have an anti-school bias due to a bad experience in the public school system. They often require adult basic education, remediation, and/or GED preparation. We at the Community College of Baltimore have required that any referred student must be ready for the training program. If a student is referred to us but requires ABE or remediation, we then refer them to that program. The programs are set up to guarantee the highest level of success in placement and we begin this in our pre-entry assessment.

The benefits to the College are many. First the institution further enhances their community service mission. The accreditation self-study has a stronger statement in this area. Secondly, the academic and some of the skills training program produce F.T.E. numbers that are most welcomed by department personnel. We are planning in Baltimore City to train approximately 1,000 students with a potential for 300 to 350 F.T.E.

Thirdly, each program is fully funded by the local social services agency. In Baltimore for fiscal year '90 this amounts to a $12,000,000.00 funding source. With these funds each of our programs employ teachers, a full-time program administrator, full-time secretary, full-time counselor and a full-time placement coordinator as well as the on-site coordinators to oversee the work experience process. We also receive room rental for each course and all required instructional and office supplies and equipment.

A final benefit has been the reactions to these programs. The college community has begun to realize that intensive academic and training programs can be offered in a time frame that is different than the usual academic time frame. The students in our programs have been "turned on" to education. We average 10 percent of these trainees who have realized the value of further education and that they have the ability to learn and have enrolled in the college.

THE CRISIS IN GENERAL EDUCATION IN THE ARTS AND AN INTERDISCIPLINARY APPROACH TO SOLVING IT: THE CREATION OF A DEPARTMENT OF INTEGRATIVE ARTS AT THE PENNSYLVANIA STATE UNIVERSITY

William J. Kelly

In the late 1960's, many of the most respected arts colleges in the United States began developing professional training programs and awarding the MFA and BFA degrees as certification of professional mastery within the varied disciplines of art. Now, 20 years later, important questions are being raised concerning the success of these professional programs, their propriety within the context of academia, and their effectiveness as means of producing future artists. However, of perhaps greater importance to the broad picture of arts education is the effect that professional programs have had on the more traditional missions of scholarship and general education. Within most disciplines, the commitment of resources and attention given to training has significantly diminished the ability to sustain quality programs in research and service. Now, as competition for qualified majors intensifies and budgets continue to shrink, the demands on resources to maintain professional programs will force other programs, like general education and research, to be eliminated or become overtly hostile to the goals of training in order to survive. Unless something is done, the next decade in university arts education will likely be typified by a profound weakening of arts colleges in terms of the total university and a state of internal warfare within departments that will become increasingly divided along lines of philosophy and viewpoint.

At The Pennsylvania State University, a new department is being formed to address many of the problems that will reach a kind of "critical mass" in the 1990's. The Department of Integrative Arts will be dedicated to multi- and interdisciplinary approaches to the teaching and study of art with special emphases on general education, minority and international art, and the creation of coursework that explores areas of art that presently fall outside the lines of the traditional discipline base. By fulfilling much of the general education coursework through an interdisciplinary approach, the individual departments and schools of the College of Arts and Architecture will be able to preserve their traditional bases of scholarship, maintain their individual programs in training, and offer general education coursework but in a proportion more reasonable to the demands of their specific missions. Most important, the belief is held by those committed to this approach that the

---

William J. Kelly, Associate Professor of Integrative Arts, The Pennsylvania State University underlying philosophy of interdisciplinary study will give students an understanding of the arts that is more meaningful and effective than the fragmented and isolated study that existed under the discipline-based approach of the past.

Arts education in the colleges and universities of America is reaching a point of crisis. The distances between programs devoted to training, scholarship, and general education are becoming greater and increasingly competitive. It is doubtful that the mounting competition will produce reasonable solutions.

Part I: The Crises In The Arts In America

There is a crisis in the arts in America. It has grown and spread across the country with no apparent regard for matters of social, economic, or regional distinction. It is found in our cities, small towns, schools, cultural centers, legislatures, and our own living rooms. At its best, it is evidenced by diminishing audiences and financial support for the arts in our country. At its worst, it shows itself as an active force that wishes to suppress or inhibit the work of artist and publicly condemn art as just another useless drain on our society like welfare, school lunch programs, and the homeless.

The crisis in the arts in America does not stem from Jesse Helms or insubstantial funding from the National Endowment for the Arts or the loss of tax credits for charitable donations to the arts. These factors, and hundreds more like them, play their part but are more accurately seen as symptoms of a far greater and more pervasive malady. The great crisis in the arts in America is that they are no longer seen as an integral part of our national life and culture and that they play no significant role in our individual lives or local communities. The arts are simply not important. The arts are peripheral. The arts are "not really for me" and are, of course, "somebody else's problem."

The result of such a national attitude is that the arts are made terribly vulnerable and left with precious little strength or resources to gather in their defense. Commercialism becomes the natural replacement for risks that dare not be taken; the idealist stance gives way to the pressure of pragmatic concerns; and social criticism becomes a luxury rather than a requisite part of art's landscape. In such an artistic wasteland, cleverness is rewarded far more than insight, success is measured by acceptance rather than worth, and the value of art is determined by brokers rather than the individual human heart.

And who suffers in such a crisis? Of course, we all do. There are things that we cannot know or understand or appreciate without the revelation of art. There are corners of the human soul that stay in shadow without the light of art. Our society and culture are lessened, diminished, and shrunken without arts that are a vital and passionate expression of our lives.

And who is to blame? Of course, we all are. The web of such failure reaches far, wide, and is very complex. But, this failure in our nation's arts is clearly attended and, in no small part, caused by the failure of arts education in this country and our universities have played a very large role in that failure.

A Brief History of the Arts In The Contemporary American University

In the 1950's and 60's, American universities began to create colleges and departments devoted to the arts in unprecedented numbers and granted them distinction and support that for years had been withheld or not even considered. This is not to suggest that the arts have not been present in our colleges and universities until the recent past or that they have been overlooked in higher education. Art, in one form or another, has been taught on the collegiate level since the middle of the 19th century but usually as "an enrichment" or, even more typically, as an "extra-curricular offering." However, some thirty years ago, there was a major shift in the perception of the arts and their place in higher education. This reversal was caused, in part, by the linked realities of the explosion in enrollment that was brought on by the arrival of the "Baby Boom Generation" and the several movements to establish a liberal core curriculum at the center of all undergraduate degree programs. Since the arts were generally perceived as necessary components in any scheme of general education, they became a central concern of the university and acquired a status equal to, yet distinct from, scientific inquiry and traditional areas of scholarship. The numbers of students entering the university then necessitated that systems and structures be developed to insure that required arts coursework could be delivered in sufficient quantity and quality to satisfy demand. And so, arts departments are created; colleges were established to administer and contain them; theatres, studios, recital halls, offices, and classrooms were constructed to house them; and faculty were hired to teach and develop programs of study.

Initially, all went well as arts colleges and departments became established and familiar parts of the university. As contemplated, the cultural life of most schools improved with the presence of major departments of art, music, and theatre. Within the departments of the various arts there existed a sense of security and promise that had never before been felt in higher education. Students were exposed and introduced to the arts as they had never been before and the ideal of an artistically literate and appreciative society was seen as a reasonable potential in America's future.

The sense of promise that was felt in the academic community was bolstered by collateral developments in both government and the private sector. The Kennedy Administration brought the arts to the attention of all americans and accorded them recognition and appreciation on a scale never before seen in Washington. Government took steps to lend material support to the advancement of the arts through the creation of the National Endowment for the Arts and helped develop partnerships between public and private agencies to further their cause. Philanthropic organizations and private foundations began to provide increased support for the arts and establish "homes for the arts" like museums, theatres, galleries, and recital halls. In time, state governments and American business joined in the effort to invigorate the nation's arts and make them accessible to every citizen.

In the university, the movement to advance the cause of the arts became, not only accepted, but a primary part of the long-term strategy of many university administrations. The arts were seen, not only as a necessary component of a liberal education, but, as prestigious enhancements to the university's image, indicators of the growing diversity of its humanistic interests, and the embodiment of the changing cultural environment of the modern university. Performing arts centers, museums of art, and media complexes that advanced the arts of film and video became common on campuses throughout the nation. Departments and colleges that had come into being less than a decade earlier found themselves gaining ever increased attention and rising priority within the university. Program expansion was encouraged and resources in both material and human terms were made available in larger and larger amounts.

Taking advantage of their enhanced position within the university, arts colleges seized this opportunity and took steps to improve the quality of their offerings and expand their academic programs. Perhaps the most significant aspect of this period of enhancement came as arts colleges and departments began to bring professional artists into the academic environment, develop coursework in professional practice, and use the resources of the university to sponsor and assist professional endeavors. In a very short time, these connections to the professional world were strengthened and formalized into a major component of study in the arts. Professional training programs were introduced into the curricula, professional faculty were hired, and the MFA and BFA degrees became common offerings in university arts departments.

During the 1960's and in the early 70's, the apparent wisdom of the professional training track was rapidly evidenced by a remarkable elevation in the quality of art produced on the campus and the growing popularity of the arts within the university community. Enrollments increased, audiences grew, and programs flourished. The "amateur" collegiate artist from the drama club or the senior ensemble was replaced by "semi-professional" companies of young artists in training for careers in performance and individuals readying themselves for lives devoted to the creation of music, visual art, crafts, and film. Art had become an integral and important part of campus life that served both students who were majors within arts colleges and the wider university community for whom the arts had become as expected a part of the university offering as sports and Greek social life.

But the creation of professional programs would prove to be something of a mixed blessing. In a very fundamental way, the mission of most departments was now divided into related, but terribly dissimilar emphases. General education had focused arts departments on the world outside, on students who had little exposure or knowledge of art who were being schooled in its recognition and appreciation. It was, in its more selfish aspects, about creating an audience and, in its more beneficent, about creating a society that was made more open and aware of man's potential. Professional training did much the opposite. It pulled the attention of departments in upon themselves in making art and its creation a focus equal to the more scholarly ideals of understanding, critical evaluation, and the comprehension of art in a social/cultural context. Professional training in the arts, like any form of professional training, tends to be exclusive, cliquish, and terribly demanding on both human and material resources. This created a level of internal competition and philosophic difference that was new to the world of arts education. In many ways, a segment of arts education was being modelled upon the vocational programs of business and science that had been long held up to scorn by the arts and humanities as a threat to the goals of a liberal education.

The creation of professional programs also divided departments along lines of background and interest. Many faculty, usually the older and established members, were scholars and not practitioners. The newly arrived professional faculty were, just as usually, practitioners and not scholars. Although there was an amicable and respectful regard for each other's skills and accomplishments, there was also suspicion about the relative propriety particularly in terms of education. Professional faculty frequently held reservations about the need for extensive study in theory, criticism, and history, especially for students enrolled in professional training options. The academic faculty, as often, viewed training without a solid background n the traditional scholarship of an art as a dilution of the standards of education and the concept of an educated person.

What prevented these two divisions to grow into adverse and discordant rivals was the philosophic viewpoint that practice was necessary to inform scholarship and that scholarship was equally needed to inform practice. As Xenophon observed over 1300 years ago, "They know the theory but not the method, do not know the theory." The key, of course, was to maintain balance and equilibrium between these two parts of the arts equation. Logic dictated that a true and profound understanding of the arts could only be gained through contact with both professional and scholarly approaches to them but the same logic also made the prospect of conflict and disunity a very real possibility given the inherent differences that existed between the two.

In the 1970's, forces both within and without the university began to shake the balance that had become so important in arts education. The most obvious and consequential change was in the movement of students away from study in the arts, humanities, and social sciences to vocational study in "growth majors" like business administration, communications, engineering, and information management. Unlike the generation that immediately preceded them, the students of the middle and late 70's were interest in careers that led to stability and monetary rewards - the antithesis of careers in the arts. Enrollments in arts colleges began to fall and continued to do so for over a decade. The university also shifted its priorities to those colleges that were experiencing enrollment growth and the support for the arts remained at mid-1970 levels or actually decreased. The once blessed arts colleges found themselves outside of the central concerns of the university and rapidly losing students to fields that promised greater growth and material rewards for their graduates.

Although many of the problems that arose in the 1970's were visited on arts colleges and existed outside of their control or influence, the colleges themselves did contribute to their own difficulties and did so in ways that ignored the most obvious and important factors that were having influence on their health and well-being. Remarkably, the period in which arts colleges experienced their greatest decline in enrollments was also the period of the greatest expansion of professional arts training programs in American universities. In 1968, there were fewer than 50 schools in the United States that granted professional degrees in theatre but, by 1978, that number had doubled and by 1988 had risen to 132 with no sign that a ceiling had been reached. Programs in art, music, and dance followed similar patterns of expansion. The result was a wild proliferation of opportunity in the midst of a diminishing demand. Competition increased and each new program added to the national list had the effect of weakening all existing programs by further diluting the pool of talent for whom these programs supposed existed. Resources that were already strapped by the limitations imposed by shifting university budgets became increasingly inadequate to support programs in professional training, general education, and traditional research. Faculty teaching loads increased, funds for development were lost to program maintenance, and the financial support for production and studio work was gradually worn away by inflation and rising materials cost.

As the 1970's ended, arts departments were characterized by negative growth, falling enrollments, increased competition for students, and an inability to secure either human or material resources to adequately support their programs. These conditions have forced arts departments into a defensive posture that is now nearly 15 years old. Universities have exacerbated the situation by directing the bulk of their resources to "growth colleges" like engineering and business administration while holding arts colleges to fixed levels despite inflation, deteriorating facilities, rising costs, and salaries that grow in inequity with each passing year. Arts colleges have compounded their own problems by holding onto curricula, programs, and coursework with little regard for their need, relative quality, or cost. Innovation has been in short supply and leadership has directed its efforts towards "reducing the amount of erosion in resources" rather than attacking the conditions that have not developed into long accepted trends and expected patterns of conduct. In short, the arts problem has deepened over the years with no practical alternatives for remedy, rescue, or recovery being presented. The promise of the early 60's has eroded into a morass of problems that now find the arts in our universities more characterized by mediocrity than accomplishment, anxiety than expectation.

The Growing Crisis in University Arts Colleges

The facts of history and the inability to change or successfully adapt to them have created problems in our arts colleges that have build for a decade and a half and are now reaching crisis proportions. Professional programs are under attack as questions pertaining to their need and validity are being raised by even their staunchest supporters. The view that there are too many programs and that many are inadequate to the demands of professional preparation is widely held and generally accepted. In a more philosophic vein, there are voices being raised in opposition to the central conception of arts training being contained within a university environment. These critics find the shelter and isolation of the campus to be unnatural to the creation of art which, in their view, demands the harsh interplay of argument and conflict that is present in "the real world" but not the university. But the major crisis that is building in arts colleges is not in the relative strength, weakness, or even the validity of professional training; it is in the deteriorating overall state of arts education in our universities and the growing failure of arts colleges to have advanced the case for the arts in our society.

The delicate balance between the missions of scholarship, general education, and professional training has become unhinged. Professional programs with their necessary high demands on resources have gradually taken precedence over the needs of general education and scholarship. The ability to even maintain training programs has forced departments to commit a higher proportion of faculty and material support to them than to other areas of their concern. As a result, departments have turned away from their natural concentrations in the arts - the study of their history, the critical evaluation of their worth, and the formulation of theory to understand and comment on their place in our society - in order to maintain a basic standard in professional programs. General education has suffered from a similar shift in priorities. Attitudes have now changed to such an extent that general education classes are frequently thought of as "service courses" rather than as a central component of the mission of arts departments. Their maintenance is commonly seen as a necessary, but compromising, price that must be paid to hold one's position in the university's core curriculum.

. Within the broader scope of the arts college itself, the strain on individual departments has resulted in a loss of collegiality and cooperation as individual disciplines find themselves in active competition for resources with one another. There is less connection between the various areas of art now than at any time in the last quarter century. Internal problems have led to a natural stance of selfprotection and preservation as disciplines withdraw into the narrow worlds of their own program needs and concerns. There is a growing sense that this may, in time, grow into open rivalry. The arts in universities have become terribly prone to defensive postures, quick to react over "turf" issues, and are growing more and more aggressive in defense of "what belongs to them." A blindness to the broader issues of art is also developing as is evidenced by the lack of significant response for our universities to arts issues of national importance like calls for censorship, reductions in federal and state support, and the devastating effects of the AIDS epidemic on the artistic community. In short, arts colleges have experienced years of underfunding and insignificant attention, developed very strong and deep seated defenses as a result, and have now become prisoners of their own localized problems and concerns.

The prospects for any meaningful change in the condition of our arts colleges are not great. Enrollment increases in the arts are not indicated by any present research and increased efforts in recruitment will only serve to redistribute the pool of students who seek arts training and do so at substantial costs to individual institutions. As a result of recent efforts to improve the quality of instruction in arts and liberal arts colleges across the country, the budget picture in many schools has improved somewhat but not on a level that will reverse the trends of the last 15 years.

The most reasonable projections for the next decade show that competition between professional programs, scholarship, and general education will continue as will the competition between individual disciplines for resources. In time, programs and departments will likely become openly hostile to one another as the threat of elimination becomes a matter of practical concern. Questions that are being raised about professional training, the quality of general education, and the need for scholarship will grow into political positions as departments and colleges are forced to divide along lines of self-interest and philosophy. The potential for the arts departments to turn into ideological battlegrounds is great, perhaps inevitable, and there is very little possibility that such a confrontation can be anything but destructive.

The creation of an artistically literate and appreciative society that was seen as a potentiality in the 1960's is becoming more and more pipe-dream or fantasy. If our arts colleges are succeeding in holding their own in regards the training of painters, sculptors, actors, directors, instrumentalists, singers, and other artists; they are certainly failing to build audiences, develop an appreciation for their work, or create a place for them in our society. Pragmatically, this means that there will be no advocates for the support or defense of the arts. It means that assaults over issues of public taste or acceptable subject matter or valid definitions what even constitutes "art" will cut deeper and deeper into the freedom that our artists can exercise and restrict their ability to say meaningful things to us as a society. It means that audiences will shrink even more and the arts will bow even more to commercial necessities and the terrible cycle will spiral down farther and farther. It means that we face the very real prospect of being a nation whose people see art as only a diversion of an investment...just another commodity to be bought or sold. In such a society. people are diminished in ways of the heart and soul but, without the arts to inform us, we probably won't even feel the loss.

Part II: An Interdisciplinary Approach to the Arts Crisis In America's Universities

At Penn State, the history and development of the College of Arts and Architecture is similar to most other large university arts institutions and the problems that are attached to it are more usual than unique. The college was started 26 years ago, began its first professional program 3 years later, experienced growth in its first 10 years, decline in its second 10 years, and has made modest recovery over the last 5 years. During the years of declining enrollments, the college's working budget actually decreased through a system know as "recycling," a policy of compulsory budget re-assessment, which accelerated many of its problems and brought on the sense of crisis faster than at many institutions. On a more positive side, there has been no formal relationship between student FTE's and budget allocations at Penn State which has kept the competition between general education and professional training programs somewhat in check, although the character of allocation follows the national trend. In all, despite some minor points particular to the institution, Penn State is a very typical university in regards the arts, their problems, and the events that have shaped and brought them to this point in history.

However, in an important break from the traditional practices of arts colleges, Penn State has developed a unique plan for coping with many of the problems that face the arts in higher education and, simultaneously, advancing the case for study in an interdisciplinary mode. The newly formed Department of Integrative Arts is dedicated to a multi- and interdisciplinary approach to the teaching and study of art with special emphases on general education, minority and international arts, special college programs like freshman seminars and intensive writing programs, and those areas of interest that presently fall outside of the traditional discipline base. Its creation marks the first departmental addition to the college since its inception and what may be the first interdisciplinary arts department in a major university in the country.

Problems in general education in the arts have long been apparent at Penn State but very difficult to solve through a discipline-based college. An extensive system of geographically remote campuses place nearly 60 percent of students who graduate from Penn State at branch campuses for, at least, the first and, frequently, the first two years of their undergraduate study. However, the realities of such a system make it a near impossibility for all disciplines of art to be represented at each campus and, in some cases, to provide any arts faculty at all. The result of this situation is that fewer than 10 percent of all undergraduates are able to complete general education requirements before their junior year which creates an extraordinary demand for general education offerings in the arts at the main campus. The individual departments in the College of Arts and Architecture have attempted to respond to the demands of general education but, given the often conflicting demands of their major programs, their response has been typically perfunctory and seldom approached with true vigor and enthusiasm.

The Department of Integrative Arts removes the issue of mandated general education from the disciplines and places it into a completely different context. To begin with, the next department holds general education as its primary focus. Faculty within the Department of Integrated Arts are drawn from the several disciplines of arts but share a common commitment to the education of non-arts majors and the necessary role of general education in the broad context of undergraduate instruction. If other departments wish to offer general education coursework in their discipline, they will certainly be encouraged and supported in that effort but the demand that they do so has been eliminated. Integrative Arts also has the ability to provide general education courses across the university without serving the demographic or facility limitations of any particular campus. Integrative Arts coursework is structured to serve broad and general needs in arts education without advancing any given art of demanding an interest in specific art as a condition of study. The advocacy of the new department is for all of the arts without any predispositions or presumptions of interest.

Of equal importance to the focus on general education is the dedication to inter- and multidisciplinary approaches to the teaching of the arts. Given the simple reality that most students come to the arts with little or no exposure to them and even less knowledge or understanding of their workings, the Department of Integrative Arts believes that it is only logical that most students would benefit from a collective introduction to the worlds of art before they make choices of study limited to specific areas and disciplines. Interdisciplinary study also furthers the understanding of "art" as a meaningful part of one's life without the promotion or ideation that is naturally advanced by the study of a single art. This focus on this broader conception of art allows for the examination of ideas, viewpoints, beliefs, and perspectives that are frequently lost to study that is focused on only one art. In addition, the interdisciplinary format demands comparison, the acceptance of contradiction, and the knowledge gained from the similarities and differences that exist across the arts.

Since the Department of Integrative Arts is not tied to any traditional base of study or approach, it has far greater freedom to approach those areas that fall outside of the established disciplines and the prevailing politic of the Western tradition. Coursework in the arts of other cultures and ethnic groups within our own that are given only limited attention in most discipline-based formats are an important focus of the new department. Areas of study that are clearly within the province of art but are difficult to approach through discipline based study will also become an important part of Integrative Arts. Popular music, performance art, variety arts like circus and vaudeville, and frequently dismissed arts like comic book fiction and stand-up comedy are already being included in the department's initial offerings.

At its core, the Department of Integrative Arts is devoted to attacking the problems of general education in the arts and, in so doing, allowing the individual disciplines of art whose histories are tied to professional training to pursue their primary goals without a sense of compromise or division in their faculties. The new department also allows interdisciplinarity to become an important component of general education and reassert the belief that there is a place for cross-over and integration in our arts colleges. Integrative arts will exist, not as a rival or threat to the disciplines, but, as a place to introduce them to the uninitiated and help them to understand their interrelationships and common concerns. The department will serve as home for those areas of arts study that cannot receive the attention that they deserve or exist outside of our traditional definitions of art. It is a place for the generalist who is being pushed out of the academic world but who has much to contribute and offer. It is a way to get back to that idea of an artistically literate and appreciative society. In both its method and its concern, the Department of Integrative Arts is a return to the basic principles of liberal study and education that formed the foundation of our arts colleges some 30 years ago. It is simply an old idea whose time has come...again.

LEARNING TO LEAD:
THE POLITICAL EMPOWERMENT OF YOUNG PEOPLE

Gregory G. Lebel
Georgia Jones Sorenson

Introduction

The Maryland Center for Political Leadership and Participation was established in 1989 at the University Maryland. The mission of the Center is to "foster the development of the next generation of political leaders." The Center especially encourages young people who are members of groups traditionally underrepresented in the political process--women, minorities, physically and developmentally-challenged, the elderly and other groups outside the mainstream of American political life.

The Center's work includes six innovative approaches beyond its traditional classroom coursework: Mentorships, Training, Interactive Computer Links, Spacelinks, and Public Television.

Mentorships

A unique feature of the Center's work is the "Project on Women and Politics." In 1986 as an initial pilot project, the Center secured the active commitment and support of women members of the Maryland General Assembly through a cooperative arrangement with the legislative caucus of women delegates and senators. With the active involvement of the caucus and the individual members, paid Fellowships were established in the legislative offices and in the Caucus itself, and later in the Office of the Governor of Maryland. These Fellowships were designed as full-time positions spanning the course of one legislative session in which the student worked directly and closely with a mentor who had achieved some level of authority in her organization, agency, or department. Initially, students were paired by race and sex with their mentor. The natural bond that develops between mentor and protege provided the students with the experience

---

Gregory Lebel, Research Director, Center for Political Leadership and Participation, 3110 Art/Sociology Building, University of Maryland, College Park, Maryland 29742
Georgia Sorenson, Director, Center for Political Leadership and Participation

and knowledge necessary to pursue studies and eventual career in public service. Perhaps more importantly, the establishment of these professional relationships offered these young women both connections and the inspiration necessary to overcome the barriers they faced in the work force and in politics.

Maryland is in many ways a natural starting place for a program such as this. The Maryland General Assembly, with forty-two women legislators, has the fastest growth rate of women elected officials, and ranks twelfth among the fifty state legislatures in the proportion of women law makers. Maryland has more women proportionally in the United States Congress than any other state, and more Black women elected officials.

The Governor of Maryland was recently cited by the National Women's Political Caucus as ranking first in the nation in numbers of women gubernatorial cabinet members and appointments, often the precursor to elective office.

The success of this relatively new program can be measured at least in a preliminary sense by considering the number of former Fellows in the Maryland program who have pursued their vocations since completing their academic work at the University. In the four years since the Fellowships were introduced, many of the Fellows have moved into positions of responsibility and influence. Five former Fellows are now Personal Assistants to the Governor of Maryland. (The Governor employees twelve Personal Assistants). Another graduate is currently serving as Executive Director of the Women Legislators of Maryland, where she served her Fellowship. Others have pursued graduate degrees in public policy and law school. Another former Fellow was the first Black woman elected president of her class from Maryland Law School. Former Fellows have run for and won their first elective office, typically for a position on their party's Central Committee.

Training

An important component of the Center's work is the annual three-day experiential training conference, Evolutionary Leadership. This innovative program brings together successful women political leaders with young aspiring leaders, potential candidates for political office, and students preparing for public careers. The program is experiential in its concept and design and multi-disciplinary in execution.

Over the three days, approximately one hundred women work together in developing an understanding, and acknowledgement of their visions for society and their lives. Special attention is directed to the issues that have traditionally mitigated against women's full participation in the political process, including stereotypes, conflicts in roles, and self-esteem. One of the most powerful exercises pairs older women with the young participants for mutual exploration of their preconceptions and misconceptions about each others' generation.

Intertwined with these exercises are workshops led by accomplished political advisors, consultants, media experts, and fund raisers. These hands-on sessions with nationally-known political experts give participants not only the knowledge and confidence necessary to act on their visions and convictions, but provide them with the unique and critical opportunity to establish initial contacts with some of the people who will prove to be invaluable contacts as their careers progress.

The Center's 1990 Evolutionary Leadership Program will broaden its purview to the emerging democracies of Eastern Europe by bringing together women from both the United States and countries such as Poland, East Germany, Czechoslovakia, and the Soviet Union. These women along with women who are studying here in the United States, will work with American students and political leaders, experts and each other to develop expertise and an ongoing international network of activist women in political and public service. The conference highlight will be a one-half-day spacelink between the program participants in College Park and a group of Soviet women in Moscow. This interactive conference will mark the beginning of an ongoing computer link-up between women from around the world.

Interactive ComputerLink

A generous gift from Apple Computer, Inc. has made possible an interactive computer link between the Center's Office, the Office of the Governor of Maryland and the Legislature. Fellows complete "journal entries" and class assignments by imputing on AppleLink.

AppleLink is a central pedagogical component of a program in which students are actively involved in the political process. Fellows assigned to the Governor are typically at hearings, press conferences, political events, and other activities which take them away from desks and telephones. The AppleLink makes it possible for students to contact the Center's office and to receive replies (and visa versa) in an efficient manner.

As the AppleLink system becomes more routinized, it is conceivable that Fellows will not need to return to campus for weekly check-ins.

The Center is also connected to an international network of political women in which students and staff can be involved in discussions and inquiries about issues that concerned them. For example, the staff now are engaged in an inquiry about the concept of democracy and the emergence of worldwide democracies with interested people around the world.

SpaceLink

On June 16, 1990, the Center will create its first international, interactive conference with women political leaders from the Soviet Union. This conference will allow Soviet elected women and U.S. elected women (and others) to communicate "face-to-face" on issues which concern them as women political leaders. The issues and questions will be ascertained by questionnaire and computer input from women leaders before the event. Congresswoman Connie Morella (R-Maryland) and Senator Klara Hallik (member of the Supreme Soviet from Estonia) will facilitate the dialogue from the two sites. Each site will also host young women political leaders.

Public Television

The Center is in the development stage of a 12-part public television show. The program, Coming of Age, profiles young leaders and their role models. The first segment profiles Rosa Park, founding mother of the civil rights movement and Cleve Jones, founder of the Names Quilt Project and Darren Swain, a young leader who has developed a mentorship program for young Black boys.

The purpose of the television show is to reach wider audiences and to dispel the myth, in part, that young people are not interested in community and public service.

Conclusion

Much has been written about the lack of interest of young people in public service and the so-called "Me-Generation". The Center is dedicated to the concept that public service is a "calling", and that we as elders have a responsibility to "call" the younger generation to service. This calling may take the form of new technological breakthroughs such as spacelinks, computer networks, and other innovations. There is every indication that young people are deeply committed if we have the courage to ask.

FROM HIERARCHY TO SELF-GOVERNANCE: RESTRUCTURING THE EDUCATIONAL INSTITUTION FOR LIBERAL LEARNING

D. Malcolm Leith

The political ideal of citizenship as self-governance and universal citizenship as universal self-governance is educationally expressed in a concept of liberal learning as learning through and for self-governance. This learning results from a high level of choice and concomitant responsibility: student's choice of and responsibility, to a degree, for both the means for gaining skill and knowledge and the ends of such skill and knowledge. This choice is based on the student's understanding of his or her needs and goals. Such learning entails intense student involvement, leading to discovery and self-transformation.

This learning through and for self-governance requires democratic structures, that is, partnerships between educational institution and students. Yet the dominant educational model in this country is hierarchical. Rank has priority over partnership, with certain privileges or limited freedoms available as the student progresses through the ranks. This authoritarian structure results in rigid, arbitrary programs to which students must conform.

Nevertheless, certain higher educational institutions -- such as Goddard College, Empire State College, the Union for Experimenting Colleges and Universities (now The Union Institute) -- have pioneered the democratic restructuring of the hierarchical educational model. This restructuring has included implementing, exploring, and offering to all students, such measures as learning contracts designed through student-teacher partnership to replace standardized course syllabi; learning objectives developed through student-teacher partnership, rather than externally imposed credit hours as criteria for achievement; curriculum related to major issues in students' lives and including outside-the-classroom learning, rather than a narrow, rigid classroom approach; evaluation of student progress through on-going dialogue rather than arbitrarily-timed testing. The restructuring has also included the flexible staffing of the core-adjunct model rather than the tenure-based departmental model; and commitment to democratic social change through service to special, previously excluded populations as a legitimate component of the institutional mission.

D. Malcolm Leith, Ph.D., Director, Academic Programs, AIM Training Programs of DC, Inc., 724 9th St., N.W., Washington, D.C. 20001

Why have these approaches not been more broadly adopted? Amid the myriad reasons (political, economic, social) which could be offered as answers is the belief that, despite lip service to the contrary, only some people -- a specially-prepared elite, perhaps -- are really capable of liberal learning, and then only after advancing to that point through the ranks of a hierarchical structure.

A program which calls into question this hierarchical view that liberal learning is best suited to an elite, and which employs democratic learning structures, is a Washington, D.C. publicly-funded adult general education program. The program's clientele is underclass adults: that is, students are chronically unemployed and underemployed; many are school drop-outs, public assistance recipients, single heads of household; some are homeless. In short, the program serves individuals usually regarded as unprepared and ill-suited for liberal education. Yet, as will be seen, the program achieves a high level of student engagement and self-transformation, hallmarks of liberal learning.

Officially, entering students (who range in age from 17 to early sixties) must read at at least a fifth grade level and must meet specified poverty guidelines. Classes are held from 8:30 a.m. to 3:45 p.m. Tuesdays through Fridays, and from 12:30 noon to 3:45 p.m. on Mondays. About 40 adults at a time, divided into groups of 20 each, participate in mathematics and language studies and in keyboarding for data processing, all in a classroom setting. Participants may remain in the program for up to 24 weeks. In order to graduate, they must show a two-grade level advancement in academic subjects, and must achieve a minimum typing skill of 25 words per minute as well as an understanding of basic data processing concepts. Many students use their time in the program to prepare for the G.E.D. (high school equivalency) test.

Students are intensely involved in their learning. For example, in response to student desire for more uninterrupted class time, class sessions have been lengthened from 45 minutes to one-and-a-half hours. Yet even with these longer sessions, students remark on how quickly class time passes. Additionally, some students arrive and begin working before the day's classes begin; some work through their lunch breaks; and others seek homework assignments (which are not required) so they can continue studying after class. This engagement in learning is especially remarkable given the competing demands and insecurities of students' home and community environments (care of children, threats from drugs, crime, homelessness, for example) which constantly weigh on them.

This involvement in academic work is accomplished by transformations in students' outlooks. Learners, who often enter with marked lack of confidence, come to recognize their capacity for learning. A typical example is the student who went from trepidation about writing to mastery of the basic components of an essay. Her new-found confidence in writing helped her to bring initiative, planning ability, and persistence to all her learning. Transformation also includes a change from lack of interest to eagerness for further learning. The remarks of one student are not unusual. "Do you know that I like to do math when I get home? Imagine, -- *me*! My kids can't believe it. In school, I hated math."

Needless to say, the program consistently achieves a high proportion (85 percent and above) of completions, and graduates have been successful in passing the G.E.D. and other tests, such as the Civil Service test for entry-level work.

Such results certainly belie the notion that those labeled underclass are unmotivated and incapable of learning. These results also indicate the power of the program's democratic pedagogical, administrative, and organizational approach for eliciting genuine learning.

The key to student engagement in learning and transformation of attitude which the program demonstrates is commitment to the view that learning is democratic, achieved by means of a partnership among students and instructors. As a result, the program is structured so as to foster self-governance, providing students with the opportunity and incentive to exercise choice and responsibility. Eight major complementary structural elements -- pedagogical, administrative, organizational -- allow for and foster the self-governance of student choice and responsibility. I see these elements as transferrable to other academic settings given an institutional commitment to self-governance and, for higher education settings, when supported by sensitive interpretation of resulting changes to accrediting and financial aid institutions, the public, and vested interests within the higher education institution. These major structural elements are as follows.

1) An initial individual assessment process in each subject area (a process including diagnostic testing) enables students to begin the subject area at the point of their own need. Thus students are not forced into an arbitrarily chosen uniform starting point, but work together with the teacher to determine their appropriate starting points.

2) A variety of learning resources within the broad curricular areas (mathematics, language, keyboarding) enable students both to choose specific content and activities according to their own learning style and need, and to set the pace of learning. These resources include cassette tapes, workbooks, computer programs, a variety of test materials, as well as teachers and fellow students.

3) Subject matter content interrelates theory with practice and vice versa, so as to enhance the opportunity for discovery in learning, thus reinforcing student initiative and partnership with the teacher and other students. Such joint discovery facilitates the consideration of fundamental subject matter issues by students and teacher, thus enhancing the quality of learning.

4) Each student tracks her or his own academic progress by maintaining individual progress forms, an activity designed to foster student control and a sense of responsibility. Like a learning contract, these forms outline a course of study, portions of which are continuously negotiated between learner and instructor. The student progress forms are complemented by a comprehensive, staff-maintained, computerized tracking system which has the additional purpose of aiding sound financial planning.

5) Meeting sequential learning objectives rather than acquiring credit hours is the criterion for student achievement. The emphasis on objectives helps students understand the progress they're making and provides further opportunity for taking responsibility for their work. For example, by knowing specifically what they need to accomplish each day, students come to class expectant about their study. They customarily begin working right away without waiting passively to be told what to do.

6) An open-entry, open-exit enrollment procedure enables students to graduate when they have completed program objectives. Thus students needn't slacken or speed up their work to conform to an arbitrary time schedule. This enrollment method complements the program's self-pacing and enhances individual responsibility.

7) An on-going, student-initiated evaluation procedure enables the student to determine his or her readiness for formal testing and for advancing to the next curricular objective. Test times are determined cooperatively between student and teacher.

8) Collegial organization of the small staff, wherein there is a good degree of respect for and understanding of the differing staff functions, minimizes artificial attention to rank and supports flexibility which in turn heightens staff responsiveness to student needs. This organizational character becomes an additional aspect of the program's partnership with students.

These structural elements are complemented by a process of intense instructor interaction with students. Usually one-on-one, though often involving small groups, this interaction stresses dialogue as the means to communication about specific subject matter and more general topics. This dialogue reinforces the rational, democratic nature of relationships in the program and so helps to enlarge and sustain the students' realization of their capacity for self-direction and mutually beneficial cooperative effort. Unlike lecture, dialogue, viewed as two-way communication between equals, requires learners to confront the responsibility implicit in equality. Dialogue thus expresses and sustains a democratic dimension of the program's educational process without which the goal of self-governance cannot truly be achieved.

If these elements were transferred to a university setting, instruction would be highly dialogic, not lecture-based or instructor-centered; curriculum would be organized around student needs and interests, and the academic departmental model would give way to a variety of evolving programs and cooperative arrangements both within and outside of the institution; the student entry and exit process would be on-going, with complementary systems of institutional record-keeping and measurement of student progress; comprehensive counseling and advising would be an essential component of the academic process; and mission would give liberal learning at least equal emphasis with preparation for specific fields.

As has been seen, the democratic, as opposed to hierarchical, process embodied in the structural elements outlined above and in on-going student-instructor dialogue, is beneficial to the target population of the program. Additionally the democratic process of this adult general education program is instructive for liberal education in general, demonstrating the universal applicability -- both in terms of expanded clientele and type of learning -- of the liberal learning process. This potential can be fulfilled as educational institutions are transformed from hierarchical structures to more democratic ones.

FACULTY EXTERNSHIPS IN THE CORPORATE WORLD: AN OPPORTUNITY FOR GROWTH

Janice Poley

Introduction

How can a College provide meaningful opportunities for faculty to grow intellectually and revitalize themselves? Most of us in higher education would probably answer that question by citing some of the usual means of faculty renewal such as sabbatical leaves, research grants, conferences and seminars.

However, at our institution, Glassboro State College, we have recently added another way for faculty to share and to increase their expertise. This new program, the Externship Program, to which our faculty have accorded enthusiastic support, has been in effect for three years. Externs are faculty who spend a working semester in business, industry, government, or a nonprofit agency. A three-year, state-funded Challenge Grant has enabled Glassboro to initiate the program. The College provides professors' salaries and benefit packages, and the grant funds the faculty members' teaching replacements.

Let me briefly describe how the Externship Program works at Glassboro and then comment on the program's results.

The Selection Process

Faculty members apply for one-semester externships in areas in which they are expert. An Extern Committee reviews the applications and awards externship leaves, usually two each semester. The committee has established guidelines by which to judge the applications and looks for projects which promote faculty development, allow faculty to become more familiar with current professional practices, and enable faculty to share their externship experience with other members of the College community. The committee also suggests that applicants locate themselves in organizations which might be a source of student internships and future student employment. Finally, the committee views an ideal extern host as an organization which is willing to take an active and ongoing interest in education at Glassboro State College.

Janice Poley, Glassboro State College

Responsibilities of the Extern

The initial obligation of applicants is two-fold: to contact an organization where they would like to pursue an externship, and to develop a sound proposal which meets the extern guidelines.

In most cases, the faculty member selects an extern site. However, the College may receive notification of additional extern opportunities and publicizes them to faculty.

Before beginning the externship, the extern meets with the Extern Coordinator to discuss the kind of projects the extern will undertake during the semester. The actual length of the extern's work week, the specific assignments, and other conditions of employment are determined by the extern and the off-campus supervisor.

Externs bring the results of their externship back to campus through such means as lectures, published reports or articles, special classes, demonstrations, and student advisement.

Externs are strongly encouraged to gain a broad knowledge of the host organization, to inquire about student internships, to discuss entry-level employment requirements with company personnel, and in general to collect information which would enable the College to better prepare students to enter the working world.

Externs also explore the concrete and lasting connections which can be made between the College and the host organization, submit formative and summative evaluations of their experience, and engage in follow-up activities which promote application of the knowledge acquired during the externship.

Responsibilities of the Extern's Host Organization

The extern and the Extern Coordinator conduct an initial conference with the off-campus supervisor to clarify the goals and objectives of both the host organization and the College. They explore ways in which they may work together to bring about mutually rewarding outcomes from their joint adventure. One positive result has been print media coverage highlighting the spirit of cooperation between the College and the external professional community.

Glassbororo State College seeks to have the host organization support the College's educational mission by providing speakers, lecturers, or part-time instructors; by sending company representatives to College institutes and seminars; by accepting positions on College advisory boards; and by acting as consultants to various College programs.

The host supervisors also complete final evaluations and suggest improvements in the Extern Program.

Program Results

During the past three years, these have been our externship placements: an economist developed a manufacturing index for the tri-state area while working at a branch of the Federal Reserve Bank; a filmmaker was a member of a prize-winning documentary film crew at NFL Films; a writing teacher learned the entire process of magazine writing and publication at a local publishing house; an artist worked in a New York art studio producing a new print process; a computer scientist spent a semester at a computer corporation working with computer programming and software design; and a speech professor whose specialty is persuasion and the influence of mass media worked at Marvel Comics in New York developing support for a special line of socially conscious comic books.

In fall 1989, we had two externs: a communications faculty member who developed new programming at a New York cable television company, and a member of the Health and Physical Education Department who developed guidelines for a competency-based curriculum for health and physical education at the secondary level while serving an externship with the New Jersey Department of Education.

From formal evaluations and other feedback about the Extern Program, we have found that externships generate benefits for each of the parties involved: the host organization, the faculty member and the College.

Benefits for the Host Organization

Faculty expertise is the chief benefit. The organization receives a well qualified and highly motivated faculty member to work on semester-long projects. Because there is an extended time period, the faculty extern can become involved in substantial projects. By special arrangement between the extern and the organization, the extern may continue with the company throughout the summer, or as a consultant.

A Glassboro faculty extern is a potential source of innovative ideas. The extern observes company policies and procedures from a fresh and objective point of view.

Companies report that training time for faculty externs is very short and on-the-job and that externs are easily integrated into the working community.

Benefits for the Extern

The greatest benefit to externs is in terms of professional development. Externs return to Glassboro with knowledge of the latest techniques and practices in their field. They are stimulated to generate ideas for curriculum development, lectures, articles, and projects. A second benefit is in terms of personal development. It has been very rewarding for faculty to realize they can function equally well in the business and academic worlds.

Benefits for the College

Our externs are ambassadors to the professional community outside the College, making the community aware of the quality of Glassboro's faculty and programs and building new confidence in our graduates. The externs establish new and valuable connections between professionals in the academy and the working world.

The following comments by externs and their offcampus supervisors indicate the value that the extern experience has had for some of those involved:

"This program is an innovative way for companies to have access to people with analytical capabilities who can bring some fresh ideas to their organizations."

"I hope that GSC feels it got as much benefit out of the extern program as we did. The extern program seem to have a great potential for building bridges between the academic and business communities."

"One of my goals in teaching is to demystify the industry. By being out and seeing how things are done, I can go back and tell my students how it really is. I can explain to them the importance of being prepared for a corporate environment. Also, it gives me a chance to recharge my batteries. Getting out for a semester is a change of pace that should prove beneficial to everyone."

"Being involved in an externship like this could improve relations between the college and the business community."

"It's given me more insight. It's given me professional growth and exposure, and I'm learning what kinds of people are hired, what kinds of education and experience are wanted."

"The entire externship experience has been very refreshing. I had much more opportunity to reflect upon the nature of the job of teacher since I felt I was, in effect, representing the academic community. I found myself examining my profession much more consciously and critically. The different perspective now makes me more assured of my choice of profession."

"I derived a sense of accomplishment from being able to master the technical environment into which I was placed."

"My effectiveness as an educator, especially in the areas of student advising and curriculum development and review, will be enhanced by my externship experience and by the effort I will make to continue to open lines of communication between our college and the business community."

"An externship adds to a professor's credibility."

However, despite these positive reactions, there remains some points for institutions to consider before sponsoring an extern program. First, just as with any faculty leave program, full-time, gifted faculty members are out of the classroom for a full semester; secondly, while it has not yet happened at Glassboro, faculty could be enticed into assuming permanent positions outside academia; and thirdly, in the absence of grants to subsidize an extern program, colleges must seek alternative funding. One possibility would be to have businesses and the College share the externship expenses.

Overall, after observing the Extern Program for three years at Glassboro, we feel that the advantages of externships far outweigh any disadvantages. Our externs are gaining valuable hands-on experience and building new bridges with the community whose needs we and our students serve. They are returning to campus with a fresh perspective, new interest, and new information to share with their colleagues and students. We are attempting to make externships a permanent part of our College's efforts to provide alternative growth opportunities for faculty.

Note: Glassboro Sate College is a multi-purpose public institution situated in southern New Jersey. It has an enrollment of approximately 9500 full-time and part-time students. There are four undergraduate schools: Liberal Arts and Sciences, Fine and Performing Arts, Business Administration, and Education and Related Professional Studies. The College has received a Challenge Grant of $4.8 million to carry out major revisions in its general education program; liberalize its pre-professional programs; and enhance its student retention programs. The Externship Program is a project of the General Education component directed by Dean Minna Doskow.

NON-TRADITIONAL INTERDISCIPLINARY PROGRAMS FOR SMALL LIBERAL ARTS COLLEGES

Paul W. Sechrist

Introduction

And it came to pass in 1985 that Southern Nazarene University, a small church-related, traditional college in Bethany, Oklahoma adopted a non-traditional approach to deliver three undergraduate interdisciplinary degree programs. This paper will address the rationale, reasons for success, as well as the specific features of SNU's non-traditional programs.

Rationale

Many small, church-related, liberal arts colleges have attempted to enter the adult education market. Often these attempts have resulted in failure. This failure may have been the result of attempts to emulate the continuing education programs at state-supported institutions. The lesson to be learned was one of economics. Simply, SNU could not compete in continuing education by offering the same programs at a higher cost. Instead of giving up the "lucrative adult education market," SNU was challenged to break away from the traditional continuing education model. The non-traditional approach presented in this paper is not unique to SNU. It is one that is currently used by many small liberal arts college with a good deal of success.

The Model

The programs developed by SNU all roughly follow the same model in goal, design, delivery, and target student population.

The Goal

The driving force for the programs at SNU is the degree. Unlike students who are "taking some courses" at the local college, the students are completing a degree. The programs are advertised as degree-completion programs (even though the student may be classified as a freshman with many credit hours ahead to actually achieve the goal).

Paul W. Sechrist, Ph.D., Executive Director of Adult/External Programs, Southern Nazarene University, 6729 NW 39th Expressway, Bethany, OK 73008.

The Design

The traditional approach for adults to complete a college degree (commuter, part-time, largely independent study programs) have limited appeal. A non-traditional design provides a highly attractive alternative. The curriculum is designed with a student-centered approach.

Specifically:

1. The programs are limited to adults (usually at least 25 years of age or over).

2. Courses are offered at locations and times that are convenient for the working adult.

3. Students are given the opportunity to petition for college credit for college-level learning based in experience or professional training.

4. The total package concept is used for two of the programs.

5. Students are regarded as either half-time or full-time students.

6. Total classroom instructional time is less than traditional courses. However, each course requires more outside of class learning (through independent or applied experiential learning).

7. Classes meet only once or twice a week (each session lasting 3-4 hours).

8. A facilitative/collaborative approach is used in teaching.

9. Course offerings do not follow a traditional academic calendar (breaks are minimal).

10. The combination of less in-class learning time, credit for experiential learning, and few breaks makes it possible for student to reach the goal in less time as compared to traditional programs.

The Student

The success of these programs may be primarily due to the student. The highly-motivated, goal-directed adult learner is the target student. In most cases, the student in these non-traditional degree-completion programs is in his or her late thirties, has attained measure of success in his or her chosen profession, has completed a number of projects or has had significant experiences that have resulted in college-level learning, and seeks a college degree.

The General Studies (GS) Program

The GS degree program leads to the Associate of Arts degree in General Studies. The degree takes a broad liberal arts approach, providing basic skills in communication and reasoning with a foundation in Western culture and philosophy. This degree plan allows students to complete all requirements for the degree while maintaining full-time employment by scheduling classes in the evenings and on weekends.

This interdisciplinary degree will meet the general education requirements for a bachelor's degree at SNU. Credit for experiential learning can be awarded through the submission of a portfolio. The Prior Learning Assessment (PLA) Center assists students who wish to petition for credit for prior experiential learning.

The Management of Human Resources (MHR) Program

The MHR Program is a bachelor's degree completion program. To be admitted, the student must have already completed two years of college (generally 62 credit hours or more). This B.A. degree requires a total of 124 credit hours.

Each student must complete the MHR major coursework at SNU. The major is interdisciplinary in nature (primarily from the fields of business, communication, and psychology). The 36 hour curriculum is divided into 10 modules (called modules since the coursework is interrelated, interdependent, and sequential) and a senior thesis. This coursework focuses on the necessary leadership, communication, and decision-making skills to develop or increase effectiveness in working with people.

The students join class-groups and complete the modules one at a time attending class one night a week (4 hour sessions) for approximately 13 months (with no breaks). Concurrent with the modules, each student designs, conducts, and presents the results of an applied research project (the senior thesis).

Each student is required to prepare a portfolio that may be used to generate college credit for non-collegiate college-level learning experiences. Students may earn up to 30 hours of experiential learning credit.

The Family Studies & Gerontology (FSG) Program

The FSG Program is very similar in design to the MHR Program. This program admits student who have already completed 2 years of college and requires 124 hours to complete the B.A. degree.

The FSG major coursework consists of 36 credit hours divided into 12 modules and 2 internships. The major is interdisciplinary in nature (primarily from the fields of sociology, psychology, and home economics). The FSG student joins a class-group, attends class one night a week, completes one module at a time (concurrent with internship experiences), and completes the required coursework in about 14 months (with no breaks).

The student is required to develop a portfolio of learning experiences that may be used to generate college credit.

The Prior Learning Assessment (PLA) Center

A key component in each of these programs is the opportunity for the student to receive credit for experiential learning and professional training. The PLA center was created to assist students who want to petition for experiential learning credit (following guidelines recommended in the literature and approved by the university).

Since 1986, almost 500 students have used the PLA center to receive credit for experiential learning. To date, the average credits earned per student is 14. Students may petition for up to 30 credits in either general education or elective courses.

The Need: The Success

The need for these accelerated, modularized programs is three-fold: (1) the design is consistent with the learning style and consumer expectations of the adult student; (2) the programs are cost effective, often times returning a healthy net margin to the sponsoring institution; and, (3) are judged by students to provide a more cohesive, relevant, and quality educational experience than traditional programs.

The success of non-traditional degree completion programs at SNU and other small, church-related schools is rather dramatic. Since 1986, SNU has enrolled over 700 students in its non-traditional programs. Since SNU and other private church-related schools rely heavily on tuition, the "higher" rate of tuition works in favor of the institution. The reduced seat-time and prior learning assessment allows for lower than normal instructional costs per credit hour. The result is a very cost effective program.

Many of these colleges, including SNU, have attracted fewer traditional age students over the last 10 years and yet had difficulty attracting the growing number of adult students due to inherent costs. The model described in this paper has mutual benefits for the adult student and the sponsoring institution.

Conclusion and Final Thoughts

At this point, the growth in the number of small, private, church-related colleges that have adopted this kind of non-traditional delivery is nothing short of phenomenal. The SNU success story is being replayed at colleges across the nation.

The proliferation of these non-traditional programs has caused most accrediting agencies to carefully scrutinize sponsoring colleges. In most cases, the schools have been commended for development of a needed delivery system. However, some schools have been criticized for compromising the mission, advertising the ease and convenience rather than the content and rigor, or for lack of quality controls in prior learning assessment.

In hindsight, the success is clear. The nation has a glut of baby-boomers who want college degrees. But these unique learners want their education on their own terms. The approach presented in this paper has accomplished that goal and has been affordable for the small, private college.

THE DEVELOPMENT OF CRITICAL SYSTEMS THINKING

David R. Stevenson

Introduction

Abstract: A retrospective study of a two year period of instruction in a Group Directed Study course on developing "critical thinking" for working adults shows the development of an instructor's perspective on the analytic and instructive values of frequently used concepts related to thinking, such as "critical" and "systems," and the role played by student feedback. In the study at least five elements were found to be part of the development process: (1) consolidation of approaches, (2) feedback from returning students, (3) work place studies, (4) a need for explanation, and (5) a need for exploration. Within the two year period the approach developed into critical systems thinking, a methodology employing aspects of systems thinking and an elaboration of the development of critical thinkers, primarily derived from the writings of Stephen D. Brookfield.

Rapid changes in the automotive work place have challenged the ability of adult educators in Detroit to produce adequate models of decision-making which stimulate, support and promote the exploration of alternatives. This rapidity of change also stimulates the educator to closely evaluate model development, and study how model building occurs in, and outside of, the classroom. If the university were serious about learning it might be more willing to listen to its students, especially in terms of how work place change compels a rethinking of not only work place thinking, but academic thinking as well. Critical systems thinking is an example of a response to students' interests, and though still in developmental stages, a study of its development reveals the value of engaging actively with new, and old, voices, and that these voices are often as important as one's own.

An Integrated Approach

In the Fall of 1987 the author taught a Group Directed Study course based on Developing Critical Thinkers, an excellent book by Stephen D. Brookfield (1). The working adult students in the interdisciplinary Weekend College Program at Wayne State University in Detroit appreciated the text but desired an outline of a model which provided a pathway to making informed decisions. This desire afforded the instructor an opportunity for model development, additionally because the changing automotive work place

---

David R. Stevenson, Assistant Professor of Science and Technology, College of Lifelong Learning, Wayne State University, Detroit, Mi 48202

emphasized new management techniques, such as team concept, total quality control and kaizen, which were not addressed in traditional critical thinking texts but were increasingly important topics which affected decision-making. This desire to build an elaborated critical thinking model continued in Directed Study courses through the Winter and Summer semesters of 1988. In the summer it was realized that the most effective way for us to model decision-making was by using the systems approach, primarily because of its widespread use in management theory (2).

From a systems approach, an expansion of Brookfield's emphasis on questioning assumptions and exploring alternatives includes the method of environmental exploration as a requisite of gaining information. Taking this as central to model building, the consolidation of Brookfield's critical thinking and the systems approach produced critical systems thinking (CST), a pathway by which the student could explore alternatives and make decisions. In development, the concept of "critical" came under intense classroom discussion, specifically in the sense of its usefulness in stressing the necessary nature of each component, especially human, in maintaining the integrity of the system. The concept of "critical" was expanded to include not only the ability to question, but to express the necessity of individual effort in group behavior. In short, we decided that there were non-critical components in a human system.

Description

By the end of the summer of 1988 the basic principles of CST were established by the class. The approach is based on awareness of relationship between system and environment, and relies upon an emphasis on the relative importance of every component within the system. It requires the participant to actively move, at least mentally, into the system's environment to acquire information, and that system change is a function of the participant making a decision concerning which aspect of the environment is necessary to include in the system. To do this, questioning assumptions and exploring alternatives were consistent attributes of the attention the participant gave to the decision-making steps, and CST provided a distinctive pathway to allow the exploration of information for decision-making.

Following is a summary of the fourth version of the CST handout:

Terminology:

Critical
System
Component
Communication
Boundary
Environment
Information
Information Flow
Levels
Probability/Chance

1. The first definition of the word critical, according to Webster's Ninth New Collegiate Dictionary (1988), is "of, relating to, or being a turning point or specially important juncture." To this extent all humans in a sociotechnical system are critical. As other components in a system are cybernetically linked to human performance, they, too, can be critical to system integrity.

2. A system is an organized set of components through which information is communicated. The system is dependent upon the environment for information.

3. The environment is what the system has possible access to but over which it has no control. Relative to one system, another system is environment if not in close communication.

4. The boundary regulates input and output of information. The boundary is maintained by each component. Communication between components within the system and between the system and environment maintains the integrity of the system.

5. Information is any useful data received by the system.

6. Information flow in a system usually occurs in a sequence. Each component receiving information is critical to information flow and the integrity of the system.

7. Theoretically, any component may become decisively critical in the system at a given point in time when that component has to make a decision which could affect the integrity of the system. Becoming decisively critical is in part a function of the probability that a component is selected, either by other components or self, to actively make a decision. Chance also plays a role in a component becoming decisively critical.

8. System level refers to the degree to which one system controls information within another. The hierarchy of top management, middle management and workers illustrate three system levels because information in each category is significantly controlled by the level above.

To begin the process of critical systems thinking the first procedure is to make observations and inquiries within the system concerning problems and opportunities. These observations and inquiries are developed into hypotheses, i.e., testable ideas about ways of changing the system. To test the hypothesis, or series of hypotheses, we derive information not only from the system but from the environment as well. Essentially, it is the information from the environment that proves important in testing hypotheses because it is from the environment that new information comes, and system change should reflect environmental change. Testing, then, begins within the system and then must move into the environment.

When one moves into the environment in search of information one is often presented with several options. To test which of these options will promote the wished-for change in the system one has to test across levels, both horizontally and vertically. Horizontal level testing means comparing possible decisions between systems on the same level. For example, if you work in an assembly team at a major automotive factory and you are curious about making a decision, i.e., making a choice out of several options, you might research how other assembly teams at other major automotive factories made a similar decision. By vertical testing, we refer to testing the validity of a decision in terms of the decision's impact on levels above and below your own. The level above the assembly team would be the team that manages the assembly team. The level below would be the families of the assembly team members. Once a decision has been made and implemented the system state has changed, from System State I to System State II. The new information, brought into the system to test a hypothesis based on observations and inquiry, changes what is communicated within the system, resulting in a change in system integrity.

One must be aware of the impact a decision will have on the future integrity of the system. Time Consciousness refers to this sense of awareness, as Level Consciousness refers to the awareness of the impact of a decision across levels.

To summarize:

Step 1. Make observations and inquiries within the system.
Step 2. Derive hypotheses from observations and inquiries, and begin testing within system and environment.
Step 3. Test hypotheses across levels, horizontally and vertically.
Step 4. Make a decision concerning options.
Step 5. Note change from System State I to System State II.

Development

In 1989 the approach went through four revisions in three semesters: the first in Winter, the second and third in Summer, and the fourth in Fall. In Winter, 1990, I began to study these periods of change and noted how the patterns of 1989 resembled those of 1988. The summers of 1988 and 1989 showed an increase in developmental activity. In 1988 it was the transition from critical thinking to critical systems thinking; in 1989 two revisions occurred during the summer. It was found that this summer activity was related to students volunteering to continue classroom discussion of CST after having studied with the instructor in either the previous Fall or Winter. Apparently, it was during these times of intense feedback and discussion that significant progress was made on model development. In sequence the yearly developmental phases appear to have been formative in Fall, informative in Winter and transformative in Summer. Table 1 shows the patterns by semester in the development of CST.

Table 1. Major Semester and Phase Patterns in the Development of Critical Systems Thinking

	Semester (Phase)		
	Winter (Informative)	Summer (Transformative)	Fall (Formative)
1988	Critical Thinking	Critical Systems Thinking	Continuation of CST
1989	CST Revision 1	CST Revision 2 Revision 3	CST Revision 4

Discussion

We may approach a discussion of the development of CST from two perspectives: as a classroom decision-making process and as a learning system for the instructor. Following the decision and action analyses of Kinston and Algie (3), we might place CST in the category of the systemic approach, as compared to the other categories of rationalist, empiricist, pragmatist, dialectic, structuralist and intuitionist. The primary reason is that the approach is based on rationalism but is structured within a system-environment relationship which directs the actions of the user. As a classroom tool its use stimulated discussion concerning the importance of each person on a team, or the extent to which a manager or supervisor must listen to employees, or the necessity of testing ideas across levels. All of these variants emphasized the need to explore, and to that extent the model was a success.

The instructor continues to learn from studying the patterns of developing CST. Through feedback, learning occurred in an increasingly accelerated rate from Fall to Summer, while teaching workloads decreased during that same time period. A lesson is that learning does not necessarily follow the pattern of formalized semesters, and times of high enrollment classes, generally in Fall, do not necessarily follow highest learning activity. If a course is exciting to students and faculty, can they continue with the course into the next semester? Learning does not necessarily follow semester containment, whether a course is formally contained in singular or multiple semesters.

In retrospect, there have been at least five major influences in the development of CST. The first, work place studies, helped to focus interest in systems thinking. The second, consolidation of data, supported the effort of the instructor to combine the qualities of the systems approach and critical thinking. The need for explanation was central to analyses of "critical" and "systems," whereas the need for exploration supported the essential theses of Brookfield. Feedback from returning students proved to be the most stimulating factor in producing significant CST revisions. Overall, we learn that learning is not constrained by formalized semester schedules, and when the opportunity presents itself to continue with a useful idea, one hopes that the curriculum will allow this choice.

References

1. Brookfield, Stephen D. Developing Critical Thinkers. San Francisco: Jossey-Bass Publishers, 1987.

2. Kast, Fremont E., and James E. Rosenzweig. Organization and Management: A Systems and Contingency Approach. 4th Ed. New York: McGraw-Hill, 1985.

3. Kinston, Warren;, and Jimmy Algie. "Seven Distinctive Paths of Decision and Action." Systems Research 6 (1989): 117-132.

CHARACTERISTICS OF SUCCESSFUL LEARNING DISABLED COLLEGE STUDENTS AND PROGRAM IMPLICATIONS

Margaret Nan Turner

Introduction

In a survey done as early as 1982 (White, Alley, Deshler, Shumaker, Warner & Clarke, Exceptional Children), 67 percent of young adults diagnosed as learning disabled (LD) planned to continue their education in a post-secondary setting. As a result, inquiries concerning special services at colleges and universities are increasing. Davis & Elkins College recognized the need to provide these special services. The LD support services at Davis & Elkins were started during the summer of 1987. The pilot program consisted of six students; the second year, 1988-89, 27 students participated in the program. For the 1989-90 year, 42 students were enrolled.

The LD support Services is an individualized program based on a cooperative model format (See Figure 1). This cooperative model makes use of existing personnel trained by the LD director to meet the specialized needs of the LD college population. Students requesting LD services must submit the following before eligibility is determined:

1. High School Transcript
2. Results of Psychological testing completed within the past three years indicating results of both ability and achievement
3. Recommendation of an LD teacher, counselor or psychologist
4. Description of the Specific Learning Disability and/or a copy of a recent IEP
5. A handwritten essay by the student requesting services indicating why services are being requested and what the student expects to achieve.

The following is highly recommended but not required:

6. A personal interview with the LD specialist
7. Participation in the Summer Institute.

Margaret N. Turner, Assistant Professor, Davis & Elkins College, 200 Sycamore, Elkins, West Virginia 26241

All applications are screened by the LD Director and the Director of Admissions. The admission counselors have been provided with a handbook, containing selected admission forms and have attended a training session to aid them in their recognition of potentially successful LD students.

This program is based on the individual. Each student receives a minimum of one-hour per week individual time with a certified LD specialist. Presently, the LD staff consists of two full-time and three part-time specialists. The content of these sessions is based on a Student Learning Plan (See Figure 2). The strategies provided are based on current research in the field of Learning Disabilities. In addition to the individual sessions, arrangements are made for the student by the LD specialist to receive the following services, as needed: test taking modifications; classroom modification arrangements; taped-texts; peer-tutoring in the content areas; periodic faculty follow-up; career/vocational counseling and personal counseling (See Figure 3).

Variables Examined

The characteristics of the potentially successful LD student are not easy to identify. During the past three years several variables have been examined to try to determine these characteristics. At this point the evidence is inconclusive but a few tendencies are beginning to emerge.

Five general variables were examined (See Table 1). They include: 1) Type of high school program; 2) High School Grade Point Average (GPA); 3) SAT scores (untimed); 4) WAIS-R scores; and, 5) First semester college GPA. Due to the small numbers (n=42), only means, medians and range of scores were examined. As the data base increases a more complete statistical analysis will be completed.

Type of High School Program

The types of high school programs the students received were divided into Private Programs and Resource Room Programs. Twelve students were enrolled in Private Schools with small classes and individual learning disabilities attention. In three cases, the schools themselves were specific to the learning disabilities population. The majority of the students, 30, were enrolled in public schools and received minimal assistance from a resource room. This assistance ranged from one hour per day with a LD specialist to when needed by the student. In both the private program and the resource room the program models used were either tutorial or learning strategy based.

High School GPA

In a recent study by Shaywitz and Shaw (1988) it was noted that high school grades may be deflated and that high school GPA's significantly underestimate college potential. This seems to be truer in the study reported in this paper. The range of GPA's (based on a 4.0 scale) was 1.23 to 3.44. The mean GPA was 2.25 and the median was 2.3.

SAT Scores

SAT scores are not required for admission to Davis & Elkins College. As a result, only 34 students of the 42 examined took the SAT. These students took the test untimed. Looking at the verbal scores, the range was 200 to 500. The mean verbal score was 340 and the median score was 340. The math scores ranged from 210 to 480 with a mean of 340 and a median of 340. This seems to be in line with a study done by Bennett, Rock and Chan (1987) which found that LD students do not exhibit a discrepancy between verbal and math scores. They do however, make the point that there needs to be serious concerns if the SAT is below 400 on either math or verbal. The national average in 1989 for SAT scores were: Verbal - Male 435, Female 422; Math - Male 498, Female 455.

WAIS-R Scores

WAIS-R scores are required to be submitted by students requesting the LD program at Davis & Elkins College. These scores are not used as a screening measure but as a documentation of the specific learning disability. In examining the Verbal scores, the range was 77 - 125 with a mean of 98 and a median of 98. Their Performance scores yielded a range of 70 - 131, a mean of 121 and a median of 98. Full Scale scores ranged from 75 - 129 with a mean of 98 and a median of 99.

First Semester College GPA

Students receiving learning disabilities services are required to take a minimum number of credits their first semester (12 credit hours). The courses are selected by the LD staff to attend to the student's identified strengths and weaknesses. A discussion concerning the services available can be found in the introduction of this paper. The range in GPA's (based on a 4.0 scale) the first semester was .63 - 3.8. The mean GPA was 2.31 and the median was 2.4.

Discussion of Results

In examining the data to this point, a few trends are emerging. It does seem that high school GPA's are not a good predictor of college potential and success. 38 percent of the students entering the program were below a 2.0 average and yet only 28 percent were below a 2.0 after the first college semester. Of the sixteen students below a 2.0 in high school only four were below a 2.0 after the first semester. Three of the twelve students receiving college GPA's below 2.0 were from Private Programs. WAIS-R scores of the students receiving below a 2.0 varied. Four students had verbal scores below 90 and five students had performance scores below 90. Comparing low SAT scores (below 300) and low GPA's yielded four students with first semester GPA's below 2.0.

Issues and Conclusions

Identified college learning disabled students have not been studied to the extent that firm conclusions can be made regarding their potential in college. The variables which may have a tremendous impact on their success may not lie in the data traditionally studied and used in this preliminary report. These variables may include: self-motivation and self-advocacy; course and faculty selection; family profiles; support systems available or developed; and, extra-curricular activities. With the increasing number of LD students being encouraged to consider college, higher education must be prepared to meet the needs of these students. The challenge is to be constantly observing and analyzing data to provide appropriate services and to advise students on post-secondary option.

References

Bennett, R.E., Rock, D.A., and Chan, K.L. (1987). SAT verbal-math discrepancies: accurate indicators of college learning disability? Journal of Learning Disabilities, 20, 189-192.

Shaywitz, S.E. and Shaw, R. (1988). The admissions process: an approach to selecting LD students at the most selective colleges. Learning Disability Focus, 3(2), 81-86.

White, W.J., Alley, G.R., Deshler, D.D., Schumaker, J.B., Warner, M.M., and Clark, F.L. (1982). Are there learning disabilities after high school? Exceptional Children, 49, 273-274.

Figure 1: Cooperative program model

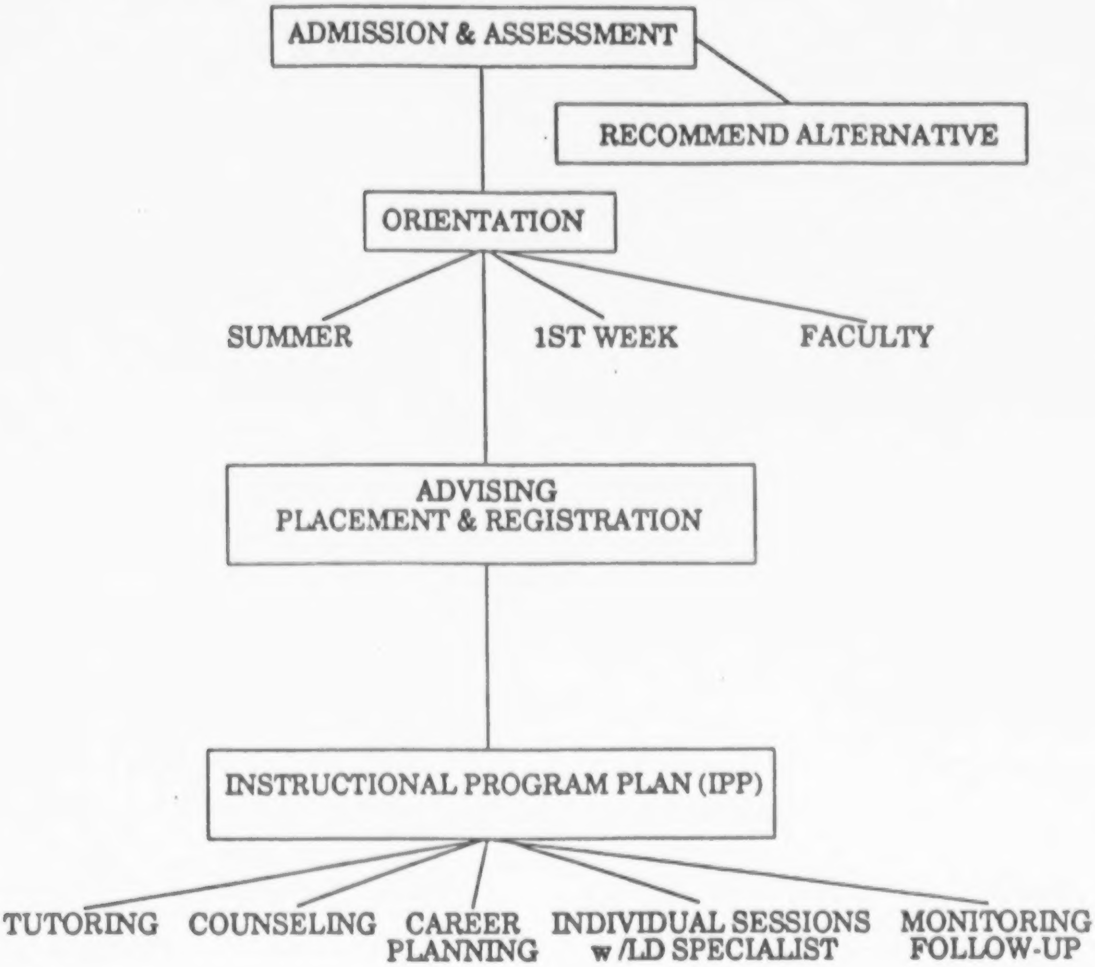

ADMISSION & ASSESSMENT
RECOMMEND ALTERNATIVE
ORIENTATION
SUMMER
1ST WEEK
FACULTY
ADVISING
PLACEMENT & REGISTRATION
INSTRUCTIONAL PROGRAM PLAN (IPP)
TUTORING
COUNSELING
CAREER PLANNING
INDIVIDUAL SESSIONS w/LD SPECIALIST
MONITORING FOLLOW-UP

Figure 2 : Student Learning Plan

SLP/STUDENT LEARNING PLAN

NAME______________________________ SEMESTER____________

LD INSTRUCTOR________________________ LD SESSION__________

CLASS______________________________ TIME____________

INSTRUCTOR_________________________

SETTING DEMANDS SUMMARY

SEMESTER OBJECTIVES BEHAVIOR GOALS

MODIFICATIONS NEEDED

SESSION GOALS

CLASS______________________________ TIME____________

INSTRUCTOR_________________________

SETTING DEMANDS SUMMARY

SEMESTER OBJECTIVES BEHAVIOR GOALS

MODIFICATIONS NEEDED

SESSION GOALS

Figure 3: Support Services

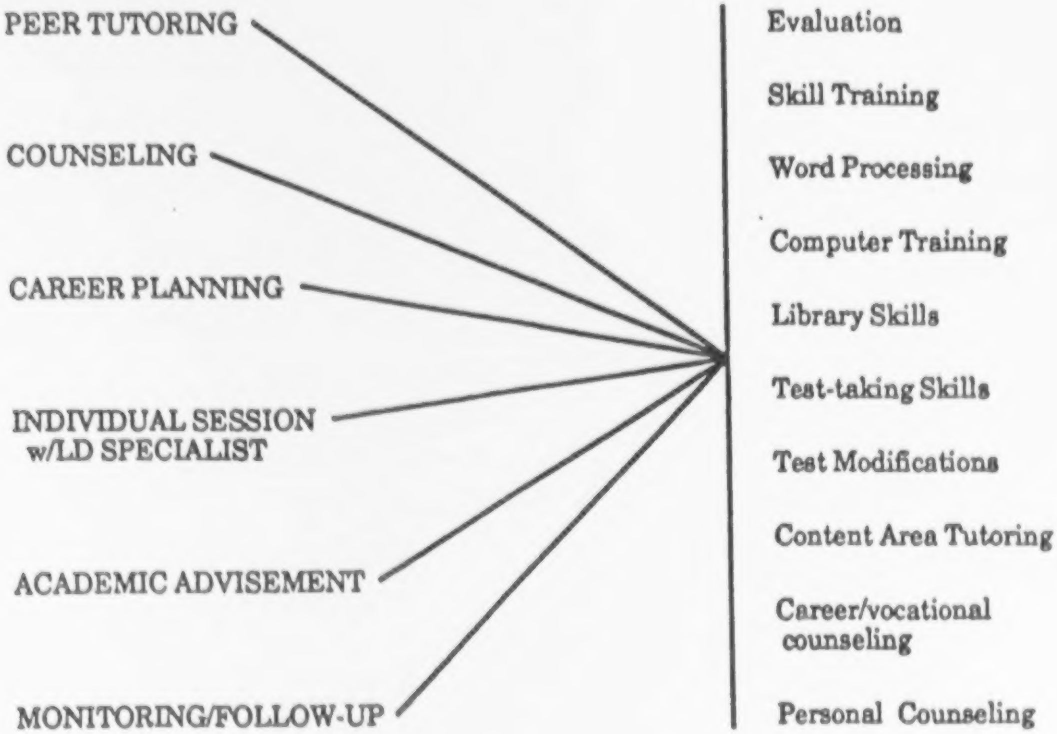

PEER TUTORING
COUNSELING
CAREER PLANNING
INDIVIDUAL SESSION w/LD SPECIALIST
ACADEMIC ADVISEMENT
MONITORING/FOLLOW-UP
Evaluation
Skill Training
Word Processing
Computer Training
Library Skills
Test-taking Skills
Test Modifications
Content Area Tutoring
Career/vocational counseling
Personal Counseling

Table 1. Individual Student Data

Student	HS 1)res 2)pri	HS GPA	SAT V	SAT M	WAIS-R V	WAIS-R P	WAIS-R FS	GPA 1
1	1	2.68	45	48	101	131	114	2.91
2.	2	1.23	30	37	88	113	98	1.2
3.	2	2.3	25	34	95	108	102	2.91
4.	1	2.43	27	36	82	86	83	3.5
5.	2	2.34	40	29	106	82	93	2.0
6.	1	2.57	30	28	95	82	88	2.91
7.	1	2.75	29	35	94	135	112	2.25
8.	1	1.75	25	24	95	94	93	2.09
9.	1	2.5	31	42	90	115	101	2.0
10.	2	2.83	45	37	102	89	97	2.45
11.	1	2.73	34	36	116	100	110	1.18
12.	1	2.39	40	43	97	102	99	2.38
13.	1	1.59	43	30	99	87	93	1.6
14.	1	1.32	50	35	111	83	99	2.39
15.	1	2.83	no score		69	102	84	3.0
16.	1	2.13	31	30	98	98	98	1.8
17.	2	1.84	42	21	98	102	111	2.4
18.	2	3.44	37	35	97	93	95	2.5
19.	1	2.78	45	43	104	99	102	3.0

20.	2	2.75	25	28	91	108	99	2.75
21.	2	1.65	no score		86	85	84	.63
22.	1	2.72	39	43	120	122	122	1.76
23.	2	2.8	41	42	106	96	102	1.6
24.	1	2.9	no score		97	96	96	2.17
25.	1	2.2	20	35	84	94	88	2.57
26.	1	1.83	31	34	94	96	92	3.64
27.	1	2.05	34	32	101	93	97	2.36
28.	2	2.43	27	23	98	85	91	1.86
29.	2	1.76	43	39	106	91	99	2.18
30.	2	1.85	35	30	100	90	96	3.33
31.	1	2.88	34	32	110	86	101	2.57
32.	1	1.96	45	43	115	108	113	2.45
33.	1	1.66	no score		98	124	111	2.4
34.	1	2.41	26	28	77	77	75	1.5
35.	1	2.16	23	23	87	91	88	1.63
36.	1	2.43	29	28	95	100	99	.75
37.	1	2.43	26	35	79	73	75	2.45
38.	2	1.81	no score		91	102	95	2.9
39.	1	1.93	39	46	96	84	89	1.55
40.	1	1.9	28	30	99	115	105	2.25
41.	1	2.73	no score		111	99	106	2.67
42.	1	1.85	35	33	120	98	111	2.33

MEETING THE NEEDS OF THE NUCLEAR POWER INDUSTRY: THE BACHELOR OF SCIENCE DEGREE IN NUCLEAR SCIENCE

Elizabeth J. Weese

Introduction

Following the 1979 accident at Three Mile Island, the Nuclear Regulatory Commission (NRC) issued a Notice of Advanced Rulemaking, informing utilities that all senior reactor operators would be required to hold bachelor's degrees by 1991. However, nuclear power utilities' response to the NRC guidelines met with considerable barriers, which hampered, if not prevented, degree opportunities.

This paper describes the development and operation of the Bachelor of Science Degree in Nuclear Science Program as it is delivered to over six hundred students at ten nuclear power plants in eight states. By removing the constraints of time, place, and manner typically encountered by non-traditional students at traditional programs, University of Maryland University College makes available degree opportunities, and helps the nuclear industry meet the need for degreed personnel.

Problem

The problems that the nuclear power industry encountered when attempting to meet the NRC recommendations were numerous. The constraints that were the most confounding were: (1) employee shift rotation; (2) plant operating schedules; (3) cost of on-campus programs; and (4) consolidating the diverse educational backgrounds of the students.

Employee Shift Rotation

Nuclear power plants function around the clock. Utilities operate on eight- and twelve-hour shifts, with shifts rotating both in hours of day and days of week worked. These shift rotations create havoc for the employee who is trying to attend a regularly scheduled class on a college campus (e.g., Tuesday, 6:00 - 9:00). The employee may be able to attend only one out of every three classes, which is not sound academic practice. Even if the course is offered on-site, shift rotation prevents regular class attendance by personnel.

Elizabeth J. Weese, Assistant Director, Office of Special Programs, University of Maryland University College, University Boulevard at Adelphi Road, College Park, MD 20742-1663

Plant Operating Schedules

Training is the lifeblood of the nuclear power industry. Plant personnel typically spend one week in six in training. Furthermore, once an employee earns certain license designations, he/she must re-qualify for that license on a regular basis. This procedure is very time consuming for the employee. Additionally, utilities have regularly scheduled re-fueling outages, a time where all of the spent fuel is replaced in the reactor and repairs are made in the plant. Employees may work up to sixteen hours a day during an outage; attending class is the least of their concerns during this time. The impact of training schedules and outages on the traditional delivery of off-campus programs is considerable. These activities can occur during any month of the year, rendering traditionally oriented semesters (January - May, June - August, September - December) ineffective.

Cost of On-campus Programs

Some utilities have attempted to overcome the previous two obstacles by sending personnel to school on a full-time basis. While this option allows for a timely completion of a degree, the financial burden is extreme. Employers pay the employee's salary while attending school, plus tuition, housing (nuclear power plants are generally not located near large urban centers where engineering schools are within commuting distance), and commuting costs, in addition to the salary for a replacement worker. Utilities following this plan have estimated the costs at being $75,000 - $125,000 per student per year. Such expenditures reduce the feasibility of this approach to degree programs for many utilities.

Diverse Educational Backgrounds

Employees at nuclear power plants have divergent academic backgrounds. Many are graduates of the Navy Nuclear Power School. Some are veterans of other branches of the military. Some have considerable college experience, while others have had no formal education past high school. It has been historically problematic for universities to consolidate this diversity into a single program.

These constraints have proven to be sizable, even insurmountable, for many colleges and universities when trying to deliver degree programs under such challenging circumstances. (When communicating with utilities about establishing a degree program, UMUC has discovered the remnants of programs that had been established, but never completed.) The delivery demands of the nuclear industry simply are not compatible with traditionally-oriented universities.

Response

The Role of University of Maryland University College

In 1981, Wisconsin Public Service Corporation, representing a group of utilities, contacted the University of Maryland University College to pursue the development of an appropriate, academically accredited program leading to a bachelor's degree in nuclear science for its employees. There were many reasons why UMUC was selected to participate in this venture. First is the university's experience in distance education. For over forty years, UMUC has served as the outreach campus of the University of Maryland system. Its mission has been the development and delivery of high quality education programs to employed adults, in many instances, under difficult circumstances. Over 80,000 adults take courses with UMUC worldwide annually.

Experience in long-distance learning was but one reason that made UMUC a natural selection. As the outreach campus of an eleven campus university system, UMUC has access to the resources of the other ten campuses. It frequently interfaces with the Nuclear Engineering program at University of Maryland College Park, and to a lesser degree, with UM Baltimore City.

Because of its long history of working with employed adults, University College has an extensive background in working with the employers of adults as well. University College is accustomed to addressing the sometimes conflicting issues of quality and cost, a particular concern to companies desiring to provide education opportunities to their employees.

Finally, UMUC has many educational technology resources of its own. Among others, the Center for Instructional Development and Evaluation (CIDE) has been instrumental in the development and maintenance of the course software.

Program Consortium

University of Maryland University College and Wisconsin Public Service Corporation did not work alone. The partnership grew to include other far-sighted utilities: Louisiana Power & Light, Baltimore Gas & Electric, and South Carolina Electric & Gas. This group of utilities was joined by the Nuclear Engineering program at College Park and Utility Resource Associates (URA), a nuclear consulting firm, to form a nuclear science consortium. The four utilities provided the development funds for a computer based instruction program; UMUC provided course development and delivery; UMCP provided course content expertise; and URA provided "real world" applications, which helped unite academia and industry.

Program Criteria

The consortium established criteria for the degree program. The first and foremost criterion was academic quality. The partnership was determined that the degree have academic integrity. Under no circumstance was the degree program to be perceived as a "credit mill." The program was to have the same rigor as an on-campus degree.

The second requirement for the program was responsiveness to industry needs. Not only should the degree have academic completeness, it also needed to be practical for the utilities. Problems, exercises and course content in general needed to have realistic application. The nuclear engineering courses would add depth to the existing utility training. Additionally, the program delivery had to be responsive to the scheduling demands of a utility. Courses needed to be developed in a manner whereby they could begin and end virtually any month of the year.

The third concern was that, despite the availability of varying educational tools, technology not be employed for its own sake. Bells and whistles are nice, but they should be integral if they are to be incorporated into program delivery.

The final criterion for the program delivery was cost-effective delivery. Cost effectiveness is measured not only in dollars and cents, but in effectiveness of time as well. The overall delivery method should enable students to earn a degree in a timely manner, with a minimum of missed work.

Sequence of Events

The establishment of criteria was the first step in the development of the degree program. In order to determine the worth of a degree in nuclear science for the nuclear power industry, all seventy-eight utility companies in the United States were surveyed. The results of this needs assessment indicated usefulness for an on-site baccalaureate program, but not necessarily in engineering. The need was for a degree that would combine technical knowledge with managerial skills. The curriculum was structured to meet that need, and will be discussed in more detail later in this paper.

Once the curriculum was designed, the consortium turned to UMUC and UMCP for selection of appropriate educational resources and course development. Nine courses from the UMCP departments of Engineering Science, Mechanical Engineering and Nuclear Engineering were selected and re-tooled for long-distance delivery. These nine courses were pilot tested by personnel at the four consortium utilities. The program began full-time delivery to the consortium utilities in 1984 and client utilities in 1987.

Bachelor of Science Degree in Nuclear Science

Curriculum

The Bachelor of Science Degree in Nuclear Science is a calculus-based, 120 semester hour degree. It consists of a primary concentration in Nuclear Science with a secondary concentration in Science and Management. A model curriculum for the degree program is found in Table 1. Three types of courses make up the curriculum: Nuclear Science Engineering Program (NSEP) courses, Lower Division Engineering Program (LDEC) courses, and Open Learning Program courses.

Table 1. Nuclear Science Degree Program Course Requirements

I.	General Education Requirements	(32 s.h.)
X X X X	Communications	9 s.h.
X X X X	Social Sciences	6 s.h.
X X X X	Humanities	6 s.h.
MATH 140	Calculus I	4 s.h.
MATH 141	Calculus II	4 s.h.
MATH 246	Differential Equations	3 s.h.
II.	Courses Related to Concentration	(14 s.h.)
PHYS 161	Physics I	3 s.h.
PHYS 262	Physics II	4 s.h.
PHYS 263	Physics III	4 s.h.
X X X X	Computer Course	3 s.h.
IIIa.	Primary Concentration: Nuclear Science (24 s.h., includes 18 UL s.h.)	
ENNU 215	Intro to Nuclear Technology	3 s.h.
ENME 217	Thermodynamics	3 s.h.
ENNU 320	Nuclear Reactor Operation	3 s.h.
ENNU 440	Nuclear Technology Lab	3 s.h.
ENNU 450	Nuclear Reactor Engineering I	3 s.h.
ENNU 455	Nuclear Reactor Engineering II	3 s.h.
ENNU 460	Nuclear Heat Transfer	3 s.h.
ENNU 465	Nuclear Reactor Sys Analysis	3 s.h.
IIIb.	Secondary Concentration: Science and Management (22 s.h., includes 15 UL s.h.)	
CHEM 103	General Chemistry	4 s.h.
ENES 230	Materials & Applications	3 s.h.
ENME 342	Fluid Mechanics	3 s.h.
HUMN 390	Writing for Managers	3 s.h.
X X X X	Management Courses	9 s.h.
IV.	ELECTIVES (28 s.h., includes 9 UL s.h.)	
TOTAL CREDITS REQUIRED		120 s.h.

The NSEP courses are the nine engineering courses mentioned earlier in this paper, and are delivered on Control Data Corporation's (CDC) PLATO network. The LDEC courses (Calculus, Physics, Chemistry) combine pre-existing CDC software with UMUC course material for delivery via PLATO, and serve as prerequisites for the NSEP courses. The management courses used in the secondary concentration as well as many of the General Education Requirement courses are part of University College's Open Learning Program courses. Open Learning courses offer rigorous, interdisciplinary guided study and stress written communication. All courses in the Nuclear Science Degree Program have been designed for multi-media long-distance delivery.

Program Delivery

Utility matriculation. Once a utility contracts with the University of Maryland University College to offer the Nuclear Science Program to its personnel, students order official copies of transcripts, standardized test scores, military records and industry/utility training records to be sent to the Office of Special Programs at University College. Each student's records are evaluated against the degree curriculum, so that every student has an individualized study plan, identifying the credits the student has, as well as those needed for graduation. (For more detail on this process, see [1].) After the individual curriculum plans are completed, they are consolidated into a utility summary plan, which is then used to determine the sequence of courses to be offered on-site.

Prior to course delivery, Office of Special Programs conducts an orientation on-site. During this two to four day period (depending upon the size of the cohort), students participate in a general orientation session (where they receive information about the program, delivery methods, time requirements, learning style, problem solving, time management, stress management, and general and specific study skills). Students take a math placement test, meet with the Academic Coordinator from OSP for advising, and participate in a workshop on the PLATO delivery system (see [1] and [2], respectively).

Delivery methods. The Nuclear Science Program uses a variety of methods for delivering courses on-site. Each course has regular faculty visits, evenly spaced over the term. Semesters may vary in length, but they average six months in length for a three- or four-credit course and eight months for a six-credit course. The number of faculty visits is dependent upon the number of credits of the course. An instructor will make four site visits for a three- or four-credit course and five site visits for a six-credit course. When the faculty member is on-site, he/she will hold three to four sections of the same lecture, over a two-day period, to accommodate the particular shift rotation at the utility. For example, class may be held from 12:30 p.m. - 3:30 p.m. for students preparing to work the 4:00 p.m. - midnight shift, 4:30 p.m. - 7:30 p.m. for the students who have just completed the 8:00 a.m. - 4:00 p.m. shift, and 8:30 a.m. - 11:30 a.m. (on the second day) for students finishing the midnight - 8:00 a.m. shift. Faculty use the time between classes in an "office hours" capacity.

Students spend approximately twelve hours in face to face contact with the professor. Additionally, each student receives home study materials, often in the form of a syllabus, textbooks, course guides, and course handbooks. Open Learning Program courses can have as many as six or seven texts for a six-credit course. For PLATO courses, students also receive PC learning materials. These materials permit the student to take lessons on a stand-alone basis on personal computers at their homes or on-site. (See [2] for more detail.)

From time to time, students in computer based courses interface with the CYBER mainframe at the University College campus. They take diagnostic tests for each module in the PLATO courses. Additionally, they can use PLATO a bulletin board, where they can leave notes for faculty members, fellow students and members of the Office of Special Programs staff. The CYBER is available virtually 24 hours a day, permitting greater student access, rather than forcing students to comply with an 8:00 - 5:00 schedule (See [2]).

Faculty members make use of all these delivery methods when teaching a course for the Nuclear Science Program. The typical course includes exams, quizzes, homework assignments, PLATO tests (for computer managed courses), papers (for Open Learning courses), and textbook readings. In addition, when appropriate, Office of Special Programs provides added learning tools such as a lab for Physics courses, and videotapes for Physics Precalculus, and several Open Learning Program courses.

Alternate sources of credit. While Office of Special Programs is capable of delivering a complete, 120-semester hour degree, thusfar it has not needed to do so. Students transfer, on the average, forty-five hours toward the degree when they matriculate, and may earn credit through regular academic courses or through a number of non-traditional credit programs. Some options for students include Cooperative Education, University College course challenge examinations, standardized examinations (e.g, CLEP), and transfer credits from local institutions. While it does not subcontract its courses, University of Maryland University College believes in being a good neighbor, and will work with colleges and universities close to the utility to determine appropriate courses for transfer credit. In some cases, Office of Special Programs develops a transfer chart of suitable courses available at several local schools from which students may select. These options are particularly useful for students who are ahead or behind the cohort regarding degree requirements. (See [1] for more detail on credit options.)

The Role of Office of Special Programs

University College established the Office of Special Programs to oversee the implementation of the Nuclear Science Degree Program. Office of Special Programs serves as a "mini-university," by functioning as the primary contact for utilities, and managing all administrative, financial, academic and student services. The office is staffed by the Director, who manages the degree program on a national basis, and is the primary contact between University College and the utility; an **Associate Director**, who serves as the chief administrative officer, and coordinates the efforts of staff members and program activities. Additionally, there are three types of managers in OSP: **Assistant Directors** for Development and Operations who, respectively, manage program delivery at a utility during the first year, and the remaining years of the contract; **Faculty Managers**, at both UMUC and UMCP, who oversee faculty activity and development (OSP hires its own faculty), as well as assuring academic quality; and **Specialty Managers**, specifically, the **Technical Coordinators**, who manage the technical and logistical aspects of the PLATO courses (see [2]), and the **Academic Coordinator**, who maintains student records and serves as the student liaison for evaluation and counseling (see [1]). There are also several assistants on staff.

Program Status

The Nuclear Science Program began delivery in 1984 to one utility with forty students at Wisconsin Public Service Corporation. Currently it is delivered at ten sites in eight states with over 600 active students. Participants include the consortium utilities, and three client utilities: Carolina Power & Light, Houston Lighting & Power, and GPU Nuclear Corporation. The first graduation was held in November, 1989 in Wisconsin.

It is anticipated that Philadelphia Electric Company will be joining the Program in 1990 and Detroit Edison Company in 1991. Additionally, existing participants are matriculating new student cohorts: Wisconsin Public Service Corporation in 1989, Houston Lighting & Power in 1989 (a third is scheduled for 1990) and South Carolina Electric & Gas in 1990. The NRC has withdrawn the proposed rulemaking for degreed operators, instead only "recommending" degrees. However, participation in the Nuclear Science Program continues to expand. The program increasingly appears as part of utility management development programs for all plant personnel and a significant factor in employee retention.

The Nuclear Science Consortium and the growing group of client utilities are committed to the academic integrity, technical capability and responsiveness of the program. Toward that end, the Consortium and clients meet twice a year in College Park to discuss various issues which might enhance the delivery of the program as well as increase the usefulness of the degree to sites. The full support of this partnership speaks well for the long-term service of the Bachelor of Science Degree in Nuclear Science to the nuclear power industry.

References

1. Haywood, L. "A Person at the Other End of the Modem: Long Distance Delivery of Student Services." Paper delivered at the Eighth Annual Conference on Non-Traditional/ Interdisciplinary Program, Virginia Beach, Virginia, 1990.

2. Myers, A. "Providing Educational Opportunities for the Nuclear Industry: The Role of Computers in the Nuclear Science Program." Paper delivered at the Eighth Annual Conference on Non-Traditional/ Interdisciplinary Program, Virginia Beach, Virginia, 1990.

INDEX

Allen, Patrick A. 3

Allen, Marti Harris 3

Ambash, Lois C. 127

Anderson, Clinton L. 171

Ashbrook, Richard M. 135

Barut, Clara J. 275

Behar, Joseph E. 308

Bell, Clara E. 218

Black, David W. 240

Blakeman, Sandra 10, 144

Bridges, Ann Marie N. 288

Bowman, Deanna H. 150

Burns, G. James 397

Burull, J. Robert 72

Campbell, Raymond W. 279

Caris, David J. 179

Carlson, Charles E. 288

Cecil, Lorraine F. 105

Clark, Mary E. 247

Czarnec, Walter 156

Davis, Cynthia 108

Davis, J. Thomas 397

Day, Leslie Overmyer 161

DeBard, Robert 255

Dendinger, Donald C. 294
Dinmore, Ian 210
Dorsey, Oscar L. 41
Dyer, Gloria 301
Erdynast, Albert 14
Fleer, Martha Hinkle 55
Frost, Christopher J. 41, 321
Frost, Kathryn K. 321
Garrett, Ralph E. 416
Gersich, Edward G. 185
Goldschmidt, Carl 400
Grim, William E. 329
Hansen, Elizabeth A. 288
Harper, Michael B. 329
Haywood, Lori A. 81
Hekala, Tamsin L. 406
Hierstein, William J. 199
Hoeft, Thea M. 193
Hoff, Joseph R. 21
Hood, Richard A. 335
Hopson, Carol S. 199
Jensen, Oscar C. 416
Johnson, Jacqueline 144
Jordan-Sita, Sharon 232
Joyce, Robert L. 275
Karger, Barry 301

Kelly, William J. 421
Kessler, Donna J. 263
Kime, Steve F. 171
Kinach, Barbara M. 204
Kiskis, Michael J. 28
Knight, Pamela D. 135
Land, James R. 115
La Noue, Patricia J. 345
Lebel, Gregory G. 432
Leith, D. Malcolm 436
Mancino, Anna M. 210
McCameron, Fritz A. 115
McClusky, Frank 380
Mc Cormick, Donald W. 14
Milan, Callistus W. 353
Moore, Carol A. 204
Murray, Richard K. 210
Myers, Alice M. 89
Nagler, Janet 10
Neal, Shirley W. 97
Osterholm, J. Roger 357
Peinovich, Paula E. 34
Peterson, Tim 103
Pierson, Michael J. 41, 321
Poley, Janice 441
Pollock, Carroll 223

Pompa, Julie R. . . . 275

Prus, Joseph S. . . . 365

Putinski, Nancy A. . . . 179

Reed, Hazel Jo . . . 49

Rembert, Wilhelmenia I. . . . 365

Roberts, Susan L. . . . 365

Romanoski, Roberta . . . 14

Rose, Jacqueline . . . 373

Sanford, James F. . . . 161

Sechrist, Paul W. . . . 446

Seigel, Arnold E. . . . 108

Shelton, Paul S. . . . 218

Sheppard, Vicki Williams . . . 55

Shine, Patricia J. . . . 62

Smith, Andrea . . . 144

Smith, Gary L. . . . 135

Sorenson, Georgia Jones . . . 432

Spear, Mary Helen . . . 10

Stevenson, David R. . . . 451

Teschner, George . . . 380

Thomas, Terrence . . . 115

Traynor, Patricia . . . 223

Trott, James W., Jr. . . . 115

Turner, Margaret Nan . . . 457

Valades, Joseph A. . . . 294

Verma, Satish . . . 115

Wallace, Brian F. 135

Weese, Elizabeth J. 466

Witt, Stanley P. 232

Yost, Carlson 388

Zenon-Loggins, Alice 223